

THE GETTY CENTER LIBRARY



*Why ask for the moon  
when we have the stars?*



Digitized by the Internet Archive  
in 2017 with funding from  
Getty Research Institute









PROCEEDINGS  
OF THE  
AMERICAN ASSOCIATION OF MUSEUMS

VOL. IV

1910





# PROCEEDINGS

OF THE

# AMERICAN ASSOCIATION OF MUSEUMS

RECORDS OF THE FIFTH ANNUAL MEETING  
HELD AT BUFFALO, N. Y.

MAY 31-JUNE 2, 1910

CHARLESTON, S. C.

1911

EDITED BY  
PAUL M. REA, SECRETARY  
THE CHARLESTON MUSEUM  
CHARLESTON, S. C.

THE WAVERLY PRESS  
BALTIMORE

OFFICERS OF THE  
AMERICAN ASSOCIATION OF MUSEUMS

1910-1911

PRESIDENT

FREDERICK J. V. SKIFF  
*Field Museum of Natural History, Chicago*

FIRST VICE-PRESIDENT

EDWARD S. MORSE  
*Peabody Museum, Salem*

SECOND VICE-PRESIDENT

EDWARD ROBINSON  
*Metropolitan Museum of Art, New York*

SECRETARY

PAUL M. REA  
*Charleston Museum, Charleston, S. C.*

TREASURER

W. P. WILSON  
*Philadelphia Museums, Philadelphia*

COUNCILLORS

1908-1911

WILLIAM M. R. FRENCH  
*Art Institute of Chicago, Chicago*

HENRY L. WARD

*Public Museum of the City of Milwaukee, Milwaukee*

1909-1912

WILLIAM J. HOLLAND  
*Carnegie Museum, Pittsburgh*

JAMES E. TALMAGE

*Deseret Museum, Salt Lake City*

1910-1913

FREDERIC A. LUCAS  
*Museums of Brooklyn Institute of Arts and Sciences, Brooklyn*

HENRY R. HOWLAND

*Buffalo Society of Natural Sciences*



## CONTENTS

	PAGE
Officers of the American Association of Museums.....	V
 Session of Tuesday, May 31, Morning	
Roll of attendance.....	1
Report of the Secretary.....	3
List of new members.....	6
Gelatine composition in museum groups, by George Shrosbree.....	10
The Shrosbree specimen hanger, by Henry L. Ward.....	13
Exhibition cases without shelves, by E. N. Gueret.....	16
A method of exhibiting large descriptive labels on the outside of museum cases, by Frank C. Baker.....	21
Museum coöperation in the Hudson-Fulton Celebration of 1909, by George F. Kunz.....	24
 Session of Tuesday, May 31, Evening	
School loan collections as prepared by the Chicago Academy of Sciences, by Frank C. Baker.....	36
The paleobotanical collections of the New York Botanical Garden, by Arthur Hollick.....	43
Botanical installation, by Charles F. Millsbaugh.....	52
 Session of Wednesday, June 1, Morning	
The training of museum curators, by A. R. Crook.....	59
Historical museums, by Frank H. Severance.....	64
 Session of Wednesday, June 1, Afternoon	
A gallery leaflet for art museums, by Louis Earle Rowe.....	75
The library of the smaller museum, by Elizabeth M. Gardiner.....	78
Museum registry of local art, by Benj. Ives Gilman.....	84
 Session of Wednesday, June 1, Evening	
The value of members to museums, by Newton H. Carpenter.....	91
 Session of Thursday, June 2, Morning	
Exhibition of fossils and skeletons in popular museums, by Henry L. Ward.....	100
Labeling large collections of mammals and birds, by Wilfred H. Osgood.....	105
The relation of field excursions to the activities of local museums, by Charles C. Adams.....	112
Organization of new museums of natural history, by Alexander G. Ruthven.....	124

	PAGE
Appendix	
Constitution.....	128
Report of Treasurer.....	130
List of members.....	132
Necrology .....	141
Index .....	143

PROCEEDINGS  
OF THE  
Fifth Annual Meeting  
OF THE  
American Association of Museums  
HELD IN BUFFALO, N. Y.  
May 31 – June 2, 1910

---

SESSION OF TUESDAY, MAY 31

*Morning*

The opening session was called to order in the rooms of the Buffalo Society of Natural Sciences by President Frederic A. Lucas, curator-in-chief of the museums of the Brooklyn Institute of Arts and Sciences. Addresses of welcome were made by Mr. Henry R. Howland, superintendent of the Buffalo Society of Natural Sciences, on behalf of his society, the Albright Art Gallery, and the Buffalo Historical Society; and by Mr. William G. Justice, comptroller of the City of Buffalo, on behalf of His Honor, Mayor Louis P. Fuhrmann, who was unable to be present. The Chair responded to the welcome so cordially extended.

Secretary Paul M. Rea then called the roll and the following is a list of the members present, with the institutions represented by them.

ROLL OF ATTENDANCE

Mr. Thomas L. Austin, Erie Public Museum, Erie, Pa.  
Mr. Frank C. Baker, Chicago Academy of Sciences, Chicago, Ill.  
Dr. S. A. Barrett, Public Museum of the City of Milwaukee, Milwaukee, Wis.  
Mr. Herbert H. Brimley, North Carolina State Museum, Raleigh, N. C.  
Mr. William L. Bryant, Buffalo Society of Natural Sciences, Buffalo, N. Y.



- Mr. Newton H. Carpenter, The Art Institute of Chicago, Chicago, Ill.  
 Dr. John M. Clarke, New York State Museum, Albany, N. Y.  
 Mrs. Elizabeth D. Courtney, Carnegie Museum, Pittsburgh, Pa.  
 Dr. A. R. Crook, Illinois State Museum of Natural History, Springfield, Ill.  
 Dr. Carlos E. Cummings, Buffalo Society of Natural Sciences, Buffalo, N. Y.  
 Dr. Oliver C. Farrington, Field Museum of Natural History, Chicago, Ill.  
 Mr. William H. Fox, John Herron Art Institute, Indianapolis, Ind.  
 Miss Anna Billings Gallup, Children's Museum, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.  
 Miss Elizabeth M. Gardiner, Worcester Art Museum, Worcester, Mass.  
 Miss Maud J. Gittings, Carnegie Museum, Pittsburgh, Pa.  
 Dr. Sigmund Graenicher, Public Museum of the City of Milwaukee, Milwaukee, Wisconsin.  
 Miss Delia Isabel Griffin, The Fairbanks Museum of Natural Science, St. Johnsbury, Vt.  
 Mr. E. N. Gueret, Field Museum of Natural History, Chicago, Ill.  
 Mr. George T. Hastings, The Philadelphia Museums, Philadelphia, Pa.  
 Dr. Arthur Hollick, New York Botanical Garden, New York City.  
 Mr. Henry R. Howland, Buffalo Society of Natural Sciences, Buffalo, N. Y.  
 Mr. William J. Hyett, Carnegie Institute, Pittsburgh, Pa.  
 Dr. Frederic A. Lucas, Museums of the Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.  
 Prof. William C. Mills, Ohio State Archeological and Historical Society, Columbus, Ohio.  
 Dr. Charles F. Millspaugh, Field Museum of Natural History, Chicago, Ill.  
 Mrs. Charles F. Millspaugh, Chicago, Ill.  
 Mr. E. L. Morris, Brooklyn Institute Museum, Brooklyn, N. Y.  
 Prof. Edward S. Morse, Peabody Museum, Salem, Mass.  
 Dr. Arnold E. Ortmann, Carnegie Museum, Pittsburgh, Pa.  
 Mr. Wilfred H. Osgood, Field Museum of Natural History, Chicago, Ill.  
 Mr. Olaf A. Peterson, Carnegie Museum, Pittsburgh, Pa.  
 Mr. Charles Louis Pollard, Staten Island Association of Arts and Sciences, New Brighton, N. Y.  
 Mr. Sydney Prentice, Carnegie Museum, Pittsburgh, Pa.  
 Mr. Paul M. Rea, The Charleston Museum, Charleston, S. C.  
 Mr. Ottomar Reinecke, Buffalo Society of Natural Sciences, Buffalo, N. Y.  
 Mr. Boyd P. Rothrock, Pennsylvania State Museum, Harrisburg, Pa.  
 Mrs. Boyd P. Rothrock, Pennsylvania State Museum, Harrisburg, Pa.  
 Mr. Louis Earle Rowe, Museum of Fine Arts, Boston, Mass.  
 Miss Cornelia B. Sage, Albright Art Gallery, Buffalo, N. Y.  
 Mr. Joseph A. Santens, Carnegie Museum, Pittsburgh, Pa.  
 Mr. Herbert E. Sargent, Kent Scientific Museum, Grand Rapids, Mich.  
 Mr. Frank H. Severance, Buffalo Historical Society, Buffalo, N. Y.  
 Mr. S. C. Simms, Field Museum of Natural History, Chicago, Ill.  
 Hon. T. Guilford Smith, Buffalo Society of Natural Sciences, Buffalo, N. Y.  
 Mrs. George W. Stevens, Toledo Museum of Art, Toledo, Ohio.  
 Mr. Douglas Stewart, Carnegie Museum, Pittsburgh, Pa.  
 Dr. James E. Talmage, Deseret Museum, Salt Lake City, Utah.

Mr. Charles R. Toothaker, The Philadelphia Museums, Philadelphia, Pa.  
Mr. Henry L. Ward, Public Museum of the City of Milwaukee, Milwaukee, Wis.  
Dr. W. P. Wilson, The Philadelphia Museums, Philadelphia, Pa.  
Miss Alicia M. Zierden, Pennsylvania State Museum, Harrisburg, Pa.

The report of the Secretary was then presented as follows:

### REPORT OF THE SECRETARY

Since the great extension of the work of the Association in the past year has made it necessary that action be taken at this meeting to determine our future policy and to provide for its execution, your Secretary desires to present a more extended report upon the work of his office than has been necessary in the past.

The *Proceedings* of the Philadelphia meeting have been edited and published as usual.

The routine correspondence of the Secretary has approximately doubled in each year since the organization of the Association, as shown by the following enumeration of personal letters written each year:

1906-7, 44; 1907-8, 100; 1908-9, 204; 1909-10, 405.

In addition to the routine correspondence there has been during the past year a large amount of special correspondence occasioned by the preparation of the Directory of American Museums. The desirability of the publication of such a directory was set forth by the Secretary at the Chicago meeting, and after extended discussion he was authorized to undertake the collection of information for this purpose. Subsequent to the Chicago meeting the Buffalo Society of Natural Sciences generously offered to publish the Directory for the Association.

At the Philadelphia meeting the Secretary reported that requests for information had been sent to about 640 museums and that replies had been received from 117. At this time the Council arranged the details of publication with Mr. Henry R. Howland, superintendent of the Buffalo Society, but no definite arrangement was made for defraying the cost of compiling the Directory. In August, 1909, the Secretary corresponded with members of the Council regarding the employment of the necessary assistance for the prosecution of the work. As a result of unavoidable delays in correspondence it became evident that formal action could not be obtained in time to avoid serious delay, and the Secretary therefore personally assumed the responsibility

of employing assistance, with the approval of the President and the Treasurer. Further expenditures were later authorized by these officers, and have now been approved by the Council.

It was originally planned to publish the Directory in time for the Buffalo meeting, but delays in the return of information from important museums necessitated postponement. The manuscript is now in the hands of the printers and will be published in the fall.

One of the most striking features of the work of compiling the Directory has been the difficulty of securing replies from many museums, six or seven communications having been sent to some institutions before information could be obtained—or in some cases to elicit the fact that no museum is maintained. The following table summarizes the number of communications which have been mailed in the compilation of the Directory:

Forms for return of information . . . . .	741
Duplicate forms sent to institutions which claimed to have lost or never received the first . . . . .	179
Personal letters . . . . .	197
Follow-up forms (5 kinds) . . . . .	888
Form letters to new museums . . . . .	97
Manuscripts prepared and sent for revision . . . . .	527
	<hr/>
	2629
Less number sent out last year . . . . .	640
	<hr/>
Total number of pieces of Directory mail . . . . .	1989
Number of routine pieces of Association mail . . . . .	1018
	<hr/>
Total number of pieces of mail sent in 1909-10 . . . . .	3007

The above table shows that 2629 communications have been mailed to a total of 838 institutions, including 197 personal letters and 527 manuscripts which have been prepared and forwarded for revision. The total number of pieces of mail which have originated in the office of the Secretary on both Directory and routine business is 3007, including 602 personal letters.

One of the important purposes for which the compilation of the Directory was undertaken was that the information secured in regard to the number, character, condition, and needs of American museums might be the basis for determining the future policy of this Association. To this end attention may be profitably directed to the following analysis of the Directory returns.

American museums may be divided according to the nature of their collections into four classes: art museums, historical museums, science museums, and special museums (*e.g.* medical museums). The membership of the Association is at present mainly derived from the science museums, with an inadequate representation of art museums and almost nothing from historical and special museums. If this Association is to represent all classes of American museums it is imperative that serious effort be made to acquaint ourselves with the reasons for their present unequal representation in our membership. To this end a special round-table discussion of museums of history has been appointed for a later session of this meeting.

One of the chief aims of our Association since its organization has been the collection of information regarding various matters of museum practice, and it may safely be said that the time has come when a certain amount of standardization of the principles of museum organization and practice is necessary to avoid unprofitable waste of energy in duplication of experiments. This is the proper work of our Association, and the Directory furnishes a basis for many such investigations. Among subjects of this character which may be studied with advantage may be mentioned the financial support of museums. A careful analysis of this subject would be useful to all museum administrators. Other subjects are suggested by the program of this meeting, and their discussion in our meetings is most helpful, but it fails of the best results when the suggestions made cannot be followed up by a permanent organization representing the Association.

To enable the Secretary to carry on the growing correspondence, to increase the membership, and to investigate subjects calculated to promote the welfare of museums, in addition to editing and publishing the *Proceedings*, a reorganization of our finances to provide for permanent assistance is necessary. The report of the Treasurer shows that the expense of compiling the Directory has exhausted nearly all the surplus in our treasury.

The publication of the *Proceedings* and other routine expenses absorb about all the present income of the Association. To provide permanent assistance to the Secretary requires that the present income of the Association be nearly doubled. It is confidently believed that this amount will ultimately be covered by increases in membership and sale of *Proceedings*, but in the meantime some more definite arrangement must be made, and this is a matter for action by the Council.

Our affairs seem to have come to a parting of the ways, where we must either enlarge or contract the sphere of our activity. The latter course would seem to imply that we have attained our maximum development—an admission which it is safe to say would not express the feeling of the Association.

The Association has received since the last meeting 32 Active Members, 4 Active Members for Life, and 3 Sustaining Members. The list of new members is as follows:

#### NEW MEMBERS

##### *Life Members*

- Mr. F. P. Graves, Graves Private Museum, Doe Run, Mo.  
 Mr. James C. Parrish, Southampton Art Museum, Southampton, Long Island.  
 Mr. Samuel L. Parrish, Southampton Art Museum, Southampton, Long Island.  
 Mr. John E. Thayer, Director, Thayer Museum, Lancaster, Mass.

##### *Active Members*

- Mr. Thomas W. Adickes, Assistant Curator, North Carolina State Museum, Raleigh, N. C.  
 Dr. S. A. Barrett, Curator of Anthropology, Public Museum of the City of Milwaukee, Milwaukee, Wis.  
 Mr. Clarence L. Brock, Director, Houston Museum and Scientific Society, Houston, Texas.  
 Mr. Charles E. Brown, Chief, State Historical Museum of Wisconsin, Madison, Wisconsin.  
 Mr. William L. Bryant, Custodian of Museum, Buffalo Society of Natural Sciences, Buffalo, N. Y.  
 Mr. Willis O. Chapin, President, Buffalo Fine Arts Academy, Buffalo, N. Y.  
 Mr. Herbert Clowes, Landscape Modeler, Public Museum of the City of Milwaukee, Milwaukee, Wis.  
 Mrs. Elizabeth D. Courtney, Assistant, Carnegie Museum, Pittsburgh, Pa.  
 Mr. John Cotton Dana, Secretary, Newark Museum Association, Newark, N. J.  
 Miss Elizabeth M. Gardiner, Assistant to the Director, Worcester Art Museum, Worcester, Mass.  
 Miss Maud J. Gittings, Custodian of Library, Carnegie Museum, Pittsburgh, Pa.  
 Dr. Sigmund Graenicher, Curator of Invertebrate Zoölogy, Public Museum of the City of Milwaukee, Milwaukee, Wis.  
 Mr. William G. Justice, Buffalo Historical Society, Buffalo, N. Y.  
 Mr. Edwin R. Kalmbach, Assistant, Division of Economic Investigations, Biological Survey, Washington, D. C.  
 Prof. William Libbey, Director, Edward Marquand Museum, Princeton, N. J.  
 Miss Caroline M. McIlvaine, Librarian, Chicago Historical Society, Chicago, Ill.  
 Mr. A. W. Miller, Curator, Oregon Academy of Sciences, Portland, Ore.



- Mrs. Charles F. Millsbaugh, Springfield, Ill.  
 Mr. Thomas L. Montgomery, Director, Pennsylvania State Museum, Harrisburg, Pennsylvania.  
 Mr. Wilfred H. Osgood, Assistant Curator of Mammalogy and Ornithology, Field Museum of Natural History, Chicago, Ill.  
 Mr. Edward K. Parkinson, Director, Albany Institute, Albany, N. Y.  
 Dr. Henry A. Pilsbry, Curator, Academy of Natural Sciences, Philadelphia, Pa.  
 Mr. Ottomar Reinecke, Buffalo Society of Natural Sciences, Buffalo, N. Y.  
 Prof. William North Rice, Wesleyan University Museum, Middletown, Conn.  
 Mr. Louis Earle Rowe, Docent, Museum of Fine Arts, Boston, Mass.  
 Mr. Herbert E. Sargent, Director, Kent Scientific Museum, Grand Rapids, Mich.  
 Mr. George Shrosbree, Chief Taxidermist, Public Museum of the City of Milwaukee, Milwaukee, Wis.  
 Mr. S. C. Simms, Assistant Curator of Anthropology, Field Museum of Natural History, Chicago, Ill.  
 Mrs. George W. Stevens, Assistant to Director, Toledo Museum of Art, Toledo, Ohio.  
 Dr. Arthur Sweeney, Secretary, St. Paul Institute, St. Paul, Minn.  
 Dr. Max Uhle, Director, Museo de Historia Nacional, Lima, Peru.  
 Mr. Francis E. Whitmore, Curator, Higgins Museum, Cortland, N. Y.  
 Mr. Charles R. Wilson, Vice-President, Buffalo Historical Society, Buffalo, N. Y.  
 Prof. P. C. Wilson, President, Board of Trustees, Chattanooga Museum, Chattanooga, Tenn.  
 Mrs. A. A. Wright, Custodian, Olney Art Collection, Oberlin College, Oberlin, Ohio.

*Sustaining Members*

- Boston Society of Natural History, Boston, Mass.  
 Colorado Museum of Natural History, Denver, Col.  
 Pennsylvania State Museum, Harrisburg, Pa.

The Secretary regrets to announce that he was advised yesterday of the death in Mont Clair, N. J., on May 5, 1910, of George F. Comfort, director of the Syracuse Museum of Fine Arts, Syracuse, N. Y., and an Active Member of this Association.

Respectfully submitted,

PAUL M. REA, *Secretary.*

On motion the report of the Secretary was accepted. The reading of the report of the Treasurer was postponed until the next session. In the absence of Messrs. French and Dorsey, chairmen respectively of the committee on free art and the committee on postal rates, reports of these committees were not presented.

The Chair called for new business and the Secretary presented recommendations of the Council as follows:

*Secretary Rea.*—"Mr. President: At a meeting of the Council of the Association held last evening it was voted to recommend that the dues of Active Members be increased from two dollars to three dollars and that the dues of Associate Members be decreased from five dollars to one dollar and that such Associate Members shall have no vote and shall not receive the publications of the Association by right.

"I might comment upon this last matter by saying that we had originally a class of Associate Members who were to pay five dollars a year. I think this was intended for various friends of the institutions where we might be meeting who would like to attend the meeting and pay a high price for the privilege. We have never had an application for that class of membership. (*Laughter.*) On the other hand, there have come before us a number of applications for membership from persons who are not strictly eligible for Active Membership, that is, who are not actively engaged in museum work, but who are nevertheless interested in museum work, and while perhaps not in a position to pay five dollars, would be very glad indeed to pay one dollar for the privilege of the meetings. These persons do not always care to receive the publications of the Association, and would not necessarily care for a vote on business matters. It is on this account that the Council recommends a reduction of the dues of this class of members from five dollars to one dollar."

*President Lucas.*—"These two matters of new business are in the way of amendments to the Constitution. There is no definite provision made in the Constitution for submitting amendments, so they could be taken up at any time, as the Association might deem best.

"The question of increased dues was very carefully considered by the Council. When the Association was founded the dues were put at a minimum amount. The wish was to have them as light as possible compatible with the carrying on of the necessary business of the Association. The business has grown largely, thanks to the energy of our very efficient secretary, and I think that an increase of the dues to three dollars would not be seriously felt, and would not decrease our membership. We wish to do all we can, not merely to keep, but to increase the membership."

*Prof. Edward S. Morse (Peabody Museum, Salem).*—"Members should clearly understand that we need money. The work has increased so extensively that a paid assistant is required. It is utterly impossible for the Secretary, who has been promoter, encourager, stimulator,



and garnerer-in of members, to give fifty per cent of his time, when it should be devoted to his own museum at Charleston. Therefore matters have come to a point where it is absolutely necessary that we have a paid assistant, and to do that we must have more money. While we are called upon for the support of many societies and an increase of our dues to five dollars might therefore be questionable, I am sure that we all have this particular work so much at heart that no member will object to an increase of one dollar, and I believe it should be made now."

*Secretary Rea.*—"As the unfortunate cause of this recommendation of the Council, I may perhaps be permitted to say a word, Mr. President. The fact is simply that we need the money, but there are various ways in which we may hope to get it. One which ought to produce a considerable amount is by increasing the number of active members, of active members for life, and especially of sustaining members. We all come in contact with museum people and if those who attend this meeting are in sympathy with the present prospects of our work I think we can go out and get more members. If we are to be an association of American museums let us try to be a representative one. The dues are small and, while there are many other associations, people who make museum work their business ought to belong to this Association.

"With regard to sustaining members, I feel sure that there are many institutions in this country which would willingly associate themselves with this movement if it were properly presented to them. I find that when I have an opportunity of presenting the subject, I usually meet with a favorable response. If we can get a number of sustaining members we shall have less need for other sources of income. An increase of a dollar a year in the dues of active members will not bring us more than \$250. Twenty-five sustaining members would give us the same amount; and before taking action, I would request the members of the Association to consider what other means there may be of raising funds—especially what we may do to increase our membership, and particularly the class of sustaining members."

On motion of Dr. Arthur Hollick it was voted that action on these amendments to the Constitution be taken on the following morning.

*President Lucas.*—"If there is no other new business to come before the Association we will proceed to the first paper for this morning."

The following paper by Mr. George Shrosbree, chief taxidermist, Public Museum of the City of Milwaukee, was then read by Mr. Henry L. Ward:

### GELATINE COMPOSITION IN MUSEUM GROUPS

The introduction of groups in the museums of America brought many perplexing problems for ambitious taxidermists to solve, calling for originality of methods to imitate the various natural conditions on land, water, marshes, etc., besides a considerable amount of mechanical ingenuity in the creation of optical illusions and in the general construction.

I have seen many very good representations of still water made by various kinds of glass, celluloid, etc., but whenever a bird or mammal has been placed in the act of swimming, the effect has never been satisfactory to me. The ripples and the swirl were needed to complete the effect.

Upon my appointment as taxidermist at the Milwaukee Public Museum a little more than eleven years ago one of my first pieces of work was to mount a group of beavers. It seemed absolutely necessary to me that one specimen at least should be placed in the act of swimming; but how about the swirl? I could not bring myself to feel that I would be satisfied unless I could create one. I decided to try a gelatine composition as an experiment, and the result exceeded my expectations. It has stood the test of more than ten years, and is just as good at the present time as on the day the group was finished. Another group of nesting marsh birds, six by sixteen feet, mounted by the same process during the year 1906, has proved equally satisfactory. Still another use to which I have applied the gelatine composition with very good results has been the preservation of pine needles on the stems, since it has the advantage of holding the needles firmly to the stem in their natural condition.

I will here describe my methods of construction and also the formula of the composition, hoping that some of my fellow-workers in the "mysteries of taxidermy" may find something of interest to them.

My method of treating pine and other evergreens has been to dip them while fresh into a solution of equal parts of glycerin and warm water, to which a few drops of carbolic acid have been added, and allow it to drain off for a few hours; then apply the composition, which must be thinned down somewhat, to the base of the needles with a brush and support it in its natural position of growth until dry.

*Beaver swimming.* Follow contour of head and upper part of the body at the water level, and cut a hole in a board to that shape. Nail it to a table or other flat surface, and model the water in clay, showing the ripples and swirls. Give the clay a thin coating of lard oil, using a soft brush. Now make a mold in the usual manner, using a fine grade of plaster for the surface, and a coarse grade with fiber worked into it for the purpose of strengthening. When the mold is thoroughly dry, carefully smooth the surface, and prime it with two or three coats of thick brown shellac. When the shellac is dry the mold is ready for the composition to be poured into it. A piece of glass having been previously prepared by having a hole cut to the contour of the head is placed in position and the composition cast of water is added as soon as it can be conveniently handled. It will look somewhat cloudy until the moisture has thoroughly dried out, when it will clear. Before closing the case apply a thin coat of coach varnish, which will make the composition quite transparent.

*Marsh group.* The construction of a marsh group, which at first looks very complicated, is in reality comparatively simple after the necessary mechanical schemes have been figured out. If there are to be clumps of cat-tails or wild rice, pieces of seven-eighths inch pine should be cut to the proper shape and holes drilled for the wires which will support the plants. If natural cat-tails are to be used it is only necessary to employ wires a few inches long and to glue the cat-tails to them. If gathered in September these will dry in good condition; they are then ironed under a damp cloth and painted. The best effect is produced by drawing them between the thumb and forefinger, letting the paint run off at the top. When thoroughly dry they should be given a coat of coach varnish thinned with turpentine containing wax. This will give a natural finish and will preserve the paint. These sections are now ready to be placed in position in the case at the desired water level. Pieces of glass should then be cut in irregular shapes to fill the spaces between the boards which carry the rushes. These may be supported where necessary by wooden blocks concealed by clumps of rushes. A few holes should be drilled in the glass to allow single rushes to rise through the water. If a nest of a grebe is to be used a part should be placed on the glass and the remainder under it. I have produced the effect of weeds growing on the bottom by the use of loose oakum and other fibrous material painted green and pulled out while the paint was still wet. A few dead rushes may be mixed with it to good advantage. Painted oakum should be

placed under the edges of each section supporting clumps of rushes and around any wooden supports used in the construction of the group.

In assembling the group the wooden sections carrying the rushes are first placed in position, then the sections of glass at the back of the case, finishing the vegetation of each section before beginning another. By this arrangement the taxidermist is able to reach all parts of the case conveniently and then to step outside and finish it. The joints of the glass are concealed by pasting over them pieces of dead rushes or pond weeds which have been prepared by soaking in glycerin. The water composition is then poured over the entire mass, using a ladle or large spoon. Among the bases of the rushes, on the wooden sections, painted oakum fibers may be used to give the "soggy" appearance seen in an actual marsh. Plenty of broken cat-tails should also be added, and if it is desired to show a bird swimming a section can be prepared as described above for the beaver and placed in position so that the hot composition will adhere to it without showing any joint.

The following directions may be useful for the preparation and use of the water composition:

*Formula for Water Composition*

Best French gelatine.....	1 pound
Glycerin .....	4 ounces
Isinglass .....	2 ounces

Add a few drops of crystal carbolic.

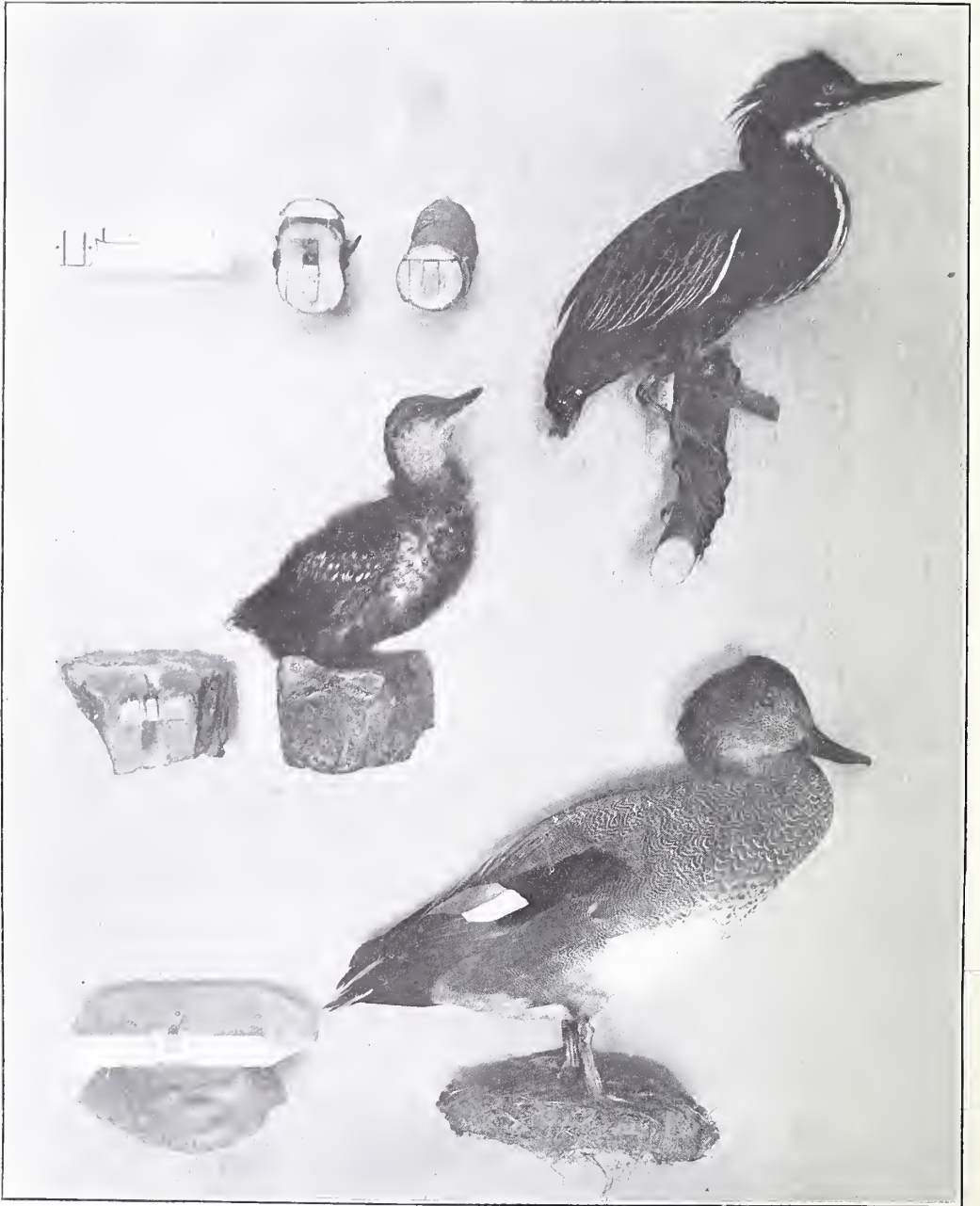
Thoroughly soak the gelatin in cold water and boil down; the same with the isinglass, but the isinglass must be strained through some fine fabric before mixing with the gelatin. Then add the glycerin and carbolic.

The composition, when thoroughly dry, should have just sufficient flexibility to cause it to lie perfectly flat on the glass. The quantity of water to be used can be regulated according to circumstances, as in this work a slight shrinkage in thickness does not make any difference.

---

*President Lucas.*—"Mr. Shrosbree's paper is now before the Association. The proper representation of water, and especially water in motion, is always a very difficult problem. I have seen the pieces mentioned by Mr. Shrosbree and they are indeed excellent."





SHROSBREE SPECIMEN HANGER



*Dr. Charles F. Millsbaugh (Field Museum).*—"I would like to ask, Mr. President, concerning the general effect of time and light upon the composition."

*Mr. Henry L. Ward (Milwaukee Public Museum).*—"On that point I can give Dr. Millsbaugh no absolutely definite assurance. Mr. Shrosbree has been using this preparation in a number of groups, and all I can say positively is that for some years, I think five or six, it has not materially changed in character. The objects remain flexible and do not shrink to any appreciable extent. How long this state of preservation may continue I do not know. I have supposed that ultimately the glycerin would evaporate. Of course glycerin is an alcohol and is, I presume, volatile, but very slightly so. In taxidermic work we sometimes hear of specimens being mounted as if they were to exist forever. Personally, I am under the impression that very few specimens are going to last forever. In fact it often happens that the specimens we expect to last a very long time, actually last only a short time."

*Dr. Millsbaugh.*—"I will say to Mr. Ward, in explanation of my question, that I was thinking more of the effect on the actual tissue of the leaves. I find that gelatin evaporates very slowly indeed and is perfectly satisfactory in itself, but I was thinking more particularly of the deterioration of the parenchyma of the leaf."

*President Lucas.*—"The next paper is by Mr. Henry L. Ward, director of the Public Museum of the City of Milwaukee."

*Mr. Ward.*—"I hoped to have a small exhibit which would place this matter properly before the members of the Association so that its advantages, and any possible disadvantages, could be seen. Some time during the day I hope to have this exhibit unpacked so that any who are especially interested may have an opportunity of seeing it."

### THE SHROSBREE SPECIMEN HANGER

Of late there seems to be a rather general desire among museum people to get away from the stiff, linear regularity of shelf exhibits, and take advantage of the greater plasticity of arrangement made possible by direct attachment of individual specimens to the backs of upright cases. In its ultimate analysis this movement reflects an appreciation of the desirability of avoiding severely scientific formality or artificial regularity in public exhibits which, most of us presumably will agree, need thereby lose none of their scientific accuracy, while



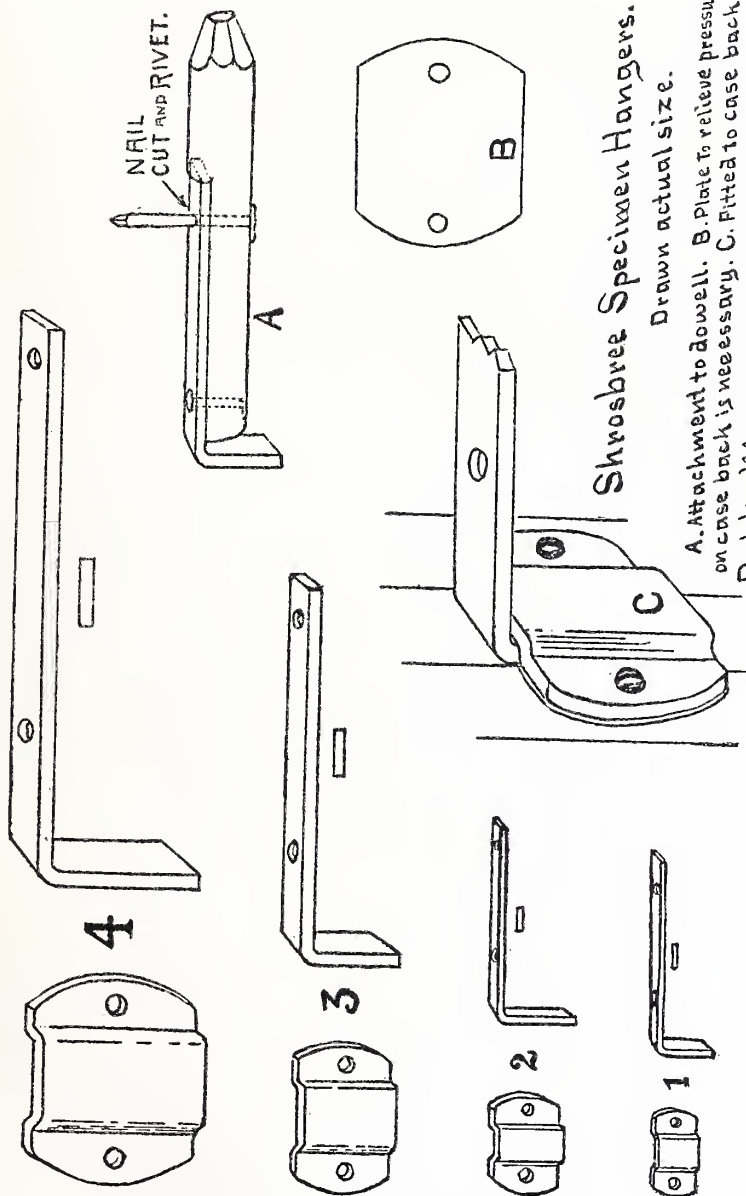
at the same time they may, in many cases, gain much in scope and almost certainly be greatly improved artistically by an approach toward nature's irregularity.

For some years at the Public Museum of the City of Milwaukee, when making some new exhibit or reinstalling some old one, we have experimented with various methods of avoiding the use of shelving. Practically everyone of these has differed from its predecessors in the manner of effecting the attachment of the specimens to the backs of the cases used, and although several of these were fairly satisfactory for the purposes for which designed they lacked the advantage of standardization. When we came to consider the advisability of so treating the entire series of mounted birds, the inadequacy of any of the systems heretofore employed by us was apparent, for here we had to deal with great variations in size and with the necessity of employing several kinds of supports, all of which we wished to treat uniformly.

Our chief taxidermist, Mr. George Shrosbree, took up the problem and after some little study and experimentation devised a simple support or hanger with its accompanying socket. A pattern maker constructed a complete series of dies for stamping and perforating the four separate sizes of these adopted. The dies once obtained, the cost of fabrication has been reduced to a minimum.

The hangers consist of strips of steel, of graduated thickness and widths, bent at right angles so as to produce a long horizontal arm with perforations for screws and a short, unperforated, vertical arm closely fitting into a stamped steel socket which is perforated with screw holes. The horizontal arms exceed the verticals three to four times in order to give sufficient length for firm attachment to the mount used. These hangers may be attached to limbs, or ground or rock-work bases in a variety of ways. When the support permits, it has been found quickest and neatest to fasten the arm of the hanger to a dowel of the right thickness, bore a hole of proper dimensions and at the required angle into the support and cement the dowel with its hanger in place. When the support is very small, such as a small twig carrying a warbler or other small bird, it is not practical to use a dowel and the hanger must be attached directly in a slot cut for its reception.

It is easy in most cases to arrange the fitting so that the support completely hides the socket which has been screwed to the back of the case. It insures stability to have the support touch the back of the case as far below the socket as possible. For this purpose, as



Shrosbree Specimen Hangers.  
 Drawn actual size.  
 A. Attachment to dowell. B. Plate to relieve pressure on case back is necessary. C. Fitted to case back.  
 Public Museum, Milwaukee, Wis.

well as to secure space for the placement of original labels, supports representing ground or stones are made of moderate depth where they abut against the case.

These hangers may be used for a great variety of purposes; for supporting wooden brackets where the exhibit of a wet preparation in glass is introduced among specimens attached to the back of a case, or even for joining the limbs to the torso in taxidermic work.

The hangers fit so closely into the sockets that they can move only upward so that it is not essential to take into consideration the equilibrium of the object. When the specimen to be hung is very heavy and its support can not be extended far enough below the socket to produce an outward pull upon it, there is some likelihood of the arm which enters the socket being forced into the wood of the back of the case. This may be somewhat guarded against by placing a piece of thin metal the full size of the socket between it and the wood in order to increase the bearing surface.

As a matter of accommodation, the Milwaukee Public Museum is willing to furnish these to other museums at cost of fabrication and handling, which at present prices is estimated at two cents each for socket and hanger of any one of the four sizes.

---

*President Lucas.*—"Are there any remarks on Mr. Ward's paper? I may say that this is an invaluable invention for which I have waited many years, and one which we began to use in the Brooklyn Institute Museum as soon as we could obtain it.

"If there are no remarks on Mr. Ward's paper, the next on the program is a paper by Mr. E. N. Gueret, assistant curator, division of osteology, Field Museum of Natural History, Chicago."

## EXHIBITION CASES WITHOUT SHELVES

Considerable attention has been given of late to exhibiting natural history objects in cases without the use of shelves. This has been extensively done in the department of anthropology in the Field Museum, much of this material, such as clothing, baskets, spears, and various implements so different in form and size not being well suited to shelves. The minerals in the department of geology, are exhibited without shelves, each mineral being placed on a base which is fastened to the back of the case, and the label placed on the front of this base.

Most of the corals in the department of zoology are also fastened to the backs of the cases, and are installed without the use of shelves.

When objects of different sizes must be installed together in a case, a much more useful, more economical, and a neater arrangement can be made if shelves are not used; but the greatest drawback has been that this plan of installation, as practiced so far, does not permit of an easy method of rearrangement in case additions are to be made.

I wish now to call your attention to a plan which I have devised, which will overcome this objection—one that is flexible and interchangeable and that will permit of rearranging or adding to the collection as desired.

Flat, iron bars  $\frac{3}{4}$ " wide and  $\frac{1}{4}$ " thick have holes drilled 4" apart and tapped for a no. 14 machine screw. Holes are drilled 1' apart and countersunk for a  $1\frac{1}{4}$ " common, flat-headed wood-screw. These bars are screwed horizontally to the backs of the cases from 12" to 18" apart.

The brackets are made of flat, structural steel,  $\frac{1}{2}$ " x  $\frac{1}{8}$ ";  $\frac{5}{8}$ " x  $\frac{3}{16}$ "; and  $\frac{3}{4}$ " x  $\frac{1}{4}$ " respectively. One end is bent at a right angle, making a projection  $\frac{1}{4}$ " long, or the thickness of the horizontal bars. A second bend is made at a right angle 2", 6", 9", and 12" from the first and in the opposite direction. This arm is from 6" to 14" in length according to the depth of the case. These brackets fasten to the horizontal plates by a round-headed iron machine screw, the projection on the bracket taking the weight from the screw and also preventing the specimen from turning or overbalancing, the other arm fitting into a socket inserted into the bottom of the base, or screwed to blocks that fit inside of the ledge of the base. By simply loosening and tightening one screw the specimen can be reinstalled in any part of the case. If wanted for examination or class work, it is removed by simply slipping it off the arm of the bracket. Of course the sizes that I have given for the brackets can be changed to meet the requirements of the specimens to be placed on exhibition according to their size, weight, etc.

Where these brackets are to be used in quantity, it probably would be preferable to have them cast, as they undoubtedly could be cast at a comparatively low cost.

Perhaps it is not out of place to mention here the movable screen so extensively used first in the Field Museum by the department of anthropology. These screens were first used for objects with little weight, and when the objects were arranged on the screen it was

easily placed in the case. About eight or nine years ago the case with a screen was used for the corals. For this installation the screens made were strong and necessarily heavy. The screen was placed on a truck of the height of the base of the case. The iron track on the truck was made to connect with the track in the case, and by this method the screen was easily run into the case. The screen shown in this photograph with its load will weigh nearly a ton, and yet one man can easily take it out of or place it in the case.

The advantages of this use of the screen are as follows:

1. The installation can be done where most convenient, and later taken to and placed in the case.
2. Only the end of the case is removed for installation; doors on the front are not needed.
3. Since the base of the case supports all material put in it, the framework of the case need not be so heavy.
4. A case without doors is more easily made dust-proof.
5. In moving cases from one room to another, the screen with its installation and the case can be moved separately.
6. It is easy to remove the installation in case the glass on the inside needs cleaning.

---

*Mr. Gueret.*—"I have a few models and photographs on exhibition if any one is interested."

*President Lucas.*—"Are there any remarks upon Mr. Gueret's paper? The Chair will be glad to hear discussion. If there be no discussion, I may say that this question of doing away with shelves is one that has been worked out by a number of museum men. In 1903 I had a small exhibit in the children's room in the Smithsonian Institution, and in the same year we installed an exhibit of deep-sea fishes at St. Louis. These are without shelves, as is also a case of fishes including the big ocean sunfish and its relatives, installed by Mr. Palmer in the National Museum. I endeavored to persuade them there to install another set of fishes in this way, but the innovation was a little bit startling, and they were installed in the regular method, on shelves. As soon as I had a museum of my own where I could carry out a few of my pet ideas, I began slowly to reinstall, without shelves, the collection in the Brooklyn Institute Museum, and if, as I hope, we shall have the pleasure of seeing some of our members at Brooklyn, we shall be very glad to show them a number of cases installed in this





CASES IN THE FIELD MUSEUM OF NATURAL HISTORY, CHICAGO, ILL., SHOWING MOVABLE SCREEN DESCRIBED BY MR. GUERET.





way. It is most preferable to other methods as it does away with the stiffness and formality, and permits of grouping with a freedom attained in no other way."

*Mr. Herbert E. Sargent (Kent Scientific Museum, Grand Rapids).*—"On this subject of shelving, Mr. President, I would like to say just a word touching the experience which has come to us in our little museum at Grand Rapids, where we have been exceedingly hampered for funds. We simply made our shelf, and had some little strips of sheet iron about two and one-half inches long and one and one-half inches wide drilled with two holes, one for screwing on at the back of the shelf, the other for screwing to the back of the case. On very light specimens this strip is bent a little to make friction at the edges where it is screwed to the shelves. For light specimens I would simply fasten the pieces to the shelf and then fasten that to the wall. If it is a heavy specimen I put a support at each end of the shelf. My cases are lined, so that it does not mar the case to change the screws, and it is a very simple matter to change and put a screw in on any half-inch of the case without any formality of lines either way. I find it works with nearly every specimen. If the bottom of the shelf is below the line of vision, my support is put under the shelf where it does not show. If it is above the line of vision, it is put above the shelf and behind the base of the specimen. The specimen is mounted individually upon the shelf and can be taken down freely, without any screwing whatever. This makes it possible to divide the specimens equally over the case.

"I would say that I use a black background, which I very much like, because all colors show well upon black—even black itself—since all the light comes to the eye; and the case is a symmetrical whole, without any large bare spaces and filled spaces from the inequality in the size of the specimens."

Mr. Charles R. Toothaker, curator of the Philadelphia Museums, then demonstrated a new container consisting of glass sides bound at the edges with narrow wooden strips. The discussion proceeded as follows:

*Mr. Henry L. Ward (Milwaukee Public Museum).*—"I would like to ask Mr. Toothaker whether these containers are prepared to hold liquids."

*Mr. Toothaker.*—"I have made a few of them with metal edges, and instead of using glue have used other cementing material. It is difficult to make them to hold liquids unless the binding is larger than

looks well. They can be made to hold liquids even in small sizes and with a narrow metal binding, but it is such a difficult piece of work that it is hardly worth while. I think that a flat bottle is the best small container for liquids, but for the larger ones and for the smaller ones not containing liquids, it seems to me that the wooden edges serve very well. I would not recommend the general use of metal edges and other cementing material than glue in the effort to hold liquids."

*President Lucas.*—"I may say that the papers this morning are interesting as showing how the esthetic side is coming into the question of museum exhibition. Great effort is made not only to have the collections instructive but to have them look well."

*Mr. E. N. Guerci (Field Museum).*—"What is the cost of these containers by the hundred?"

*Mr. Toothaker.*—"We have not made them by the hundred. We have made them in special sizes and comparatively few at a time in our own carpenter shop, and we have not kept an accurate account of the cost. I am sure that they are very cheap indeed in comparison with the square glass jar of equal quality."

Mr. Charles Louis Pollard, curator-in-chief of the Staten Island Association of Arts and Sciences, then demonstrated a semi-cylindrical exhibition jar provided with flanges on the flat side for the insertion of opaque backgrounds of any desired color. This jar is designed for use with the semi-cylindrical face toward the front. The discussion of this subject proceeded as follows:

*President Lucas.*—"I would like to ask Mr. Pollard if this jar could not be reversed. If it were made without any flange and turned with the flat side to the front it would occupy just half the space of a round jar and give absolutely no distortion."

*Mr. Pollard.*—"There would be no advantage in that for it would have practically the effect of the ordinary rectangular jar."

*President Lucas.*—"You would have half the contents."

*Mr. Pollard.*—"Yes, it could be done of course."

*Dr. Arnold E. Ortmann (Carnegie Museum).*—"Where are they made?"

*Mr. Pollard.*—"They are manufactured by a European firm and imported by the Kny-Scheerer Company of New York. I know of no other American agents. The price is not especially high in view of the fact that they are an imported product. I am sorry that I am not able to quote exact figures at present, but, in the long run, they are certainly not any more expensive than the ordinary cylindrical jar. The price is higher than that of the square jars."

*Mr. Henry L. Ward (Milwaukee Public Museum).*—"I would like to ask whether the distortion in this jar is any less than it would be in the cylindrical jar in which the specimen is mounted on a slab with iron or black glass and dropped into the jar."

*Mr. Pollard.*—"No, there is no less distortion, but the chief advantage is that the cylindrical glass is unnecessary in this case because you can put your backing of cardboard or other material directly on the outside of the jar and easily remove it. It is unnecessary to have a separate mounting."

Mr. Pollard then read a paper describing a home-made label holder.

There being no discussion of this subject the following paper was read by Mr. Frank C. Baker, curator, Chicago Academy of Sciences:

#### A METHOD OF EXHIBITING LARGE DESCRIPTIVE LABELS ON THE OUTSIDE OF MUSEUM CASES

One of the many problems of the museum administrator is the proper location of the descriptive label. That the descriptive label is a good and a necessary part of an exhibit there seems to be no question, the problem being where to place it in the case so that it will be conspicuous enough to attract attention and still not be obtrusive enough to mar or to detract from the exhibit. In the museum of the Chicago Academy of Sciences, the cases are all of wooden construction and hence the frames and the door posts are rather large and more or less conspicuous. A little experimentation soon made the fact quite evident that these conspicuous wooden partitions between the glasses of the doors would serve as excellent places for the attachment of large descriptive labels. It further became evident, at least in the vertebrate exhibits, that the majority of the museum visitors needed simply the English name of the specimen, the scientific name and the other more technical details being passed by with but a glance.

With the end in view of making the bird exhibits more useful to the average visitor as well as to the bird student, the labels inside of the cases have been limited to the commonly accepted English name printed in large type and placed directly above the bird. In the exhibit of local birds the descriptive matter is placed on the outside of the cases and consists of a short description of the family, and a

list of the birds in each family with the common and scientific name, the nature of each species, whether resident or migrant, and the time of arrival and departure. Each side of the local bird cases contains four labels, each thirty-four inches long, set in narrow black frames which are attached to the wooden door post by means of the bird fastener described at the Philadelphia meeting.<sup>1</sup> This fastener permits the label to be easily and quickly removed and again replaced.

In the alcove cases, containing the nesting birds of Illinois, the descriptive labels and distribution maps are placed in long, narrow frames and fastened one to each end of the case. This is rendered possible by the presence of a pillar at one end of the case which prevents the frame from being in the way of visitors. In the last named cases, the inside labels are restricted to the common, or familiar English name, printed in eighteen-point type and placed at the top of the case, directly over the exhibit. The different bird groups are lettered and these letters correspond with similar letters on the descriptive labels on the outside of the case.

The upper part of the cases above the doors is utilized for the display of a framed label printed in very large type, conveying such information relative to the contents of the case as, "Nesting Birds of Illinois," "Birds of Chicago Area," etc. In other words, these labels are guide posts to the collections.

Two other problems are ever present in connection with the descriptive label. One, the legibility; and the other, the proper placing of the label on the case, so that, as has been so well expressed by Dr. Lucas recently, "the visitor will need neither a step-ladder nor a prayer rug." The large framed labels first spoken of extend from within thirty-six inches of the floor to a height of about six feet above the floor, this spacing rendering the perusal of the label an easy matter by a person of average height. In the cases of life histories, the lower map is within twenty inches of the floor, but this may be studied with but little effort. The reading matter on these cases is all placed at a height of twenty-eight inches above the floor, which renders reading quite comfortable.

The legibility of the labels has been secured by the use of twelve-point type of the face usually used for book work. It has been found that a heavy, bold-faced type, at least of the smaller points, is not

---

<sup>1</sup>Exhibition Cases Without Shelves. *Proc. Am. Assoc. Mus.*, Vol. III, 1909, p. 128.

so easily read as is a type with a rather thin face. Experience has also abundantly and conclusively proven that the labels for museum exhibits, which are intended to be read, must be printed with good black ink on a light background.

An exhibit in which the descriptive matter is confined to frames which are attached to the outside of the case, is rendered much more pleasing in general appearance than is a case in which this reading matter is cut up into small labels and scattered through the exhibit. The placing of the label on the outside of the case also renders it much more legible because of the ease with which the visitor may read it, the focus being easily adjusted to suit the individual need.

It will probably be possible in the future to plan cases so that provision may be made for the placing of large labels on the outside. With the majority of museum men, however, the problem will be confined to the utilization of cases already provided. That much may be done along this line with the expenditure of but little time or money, has been demonstrated by the Academy. To what extent individual labels can be eliminated from the inside of the case, is a question which will have to be answered by experience. In the cases of the bird life histories exhibited in the Academy, it was comparatively easy to limit the inside labels to six, one for each life history. In the cases of local birds, arranged in families, it was necessary to provide a separate label for each bird. In invertebrate exhibits it is probable that the usual identification label must accompany each tablet or tray of specimens. It is quite possible, however, to place all descriptive matter in frames on the outside of both longitudinal and vertical cases. It is confidently believed that the general adoption of such a plan would make our museums not only more attractive but decidedly more useful.

---

In concluding his paper Mr. Baker also referred to the apparatus for hanging specimens without shelves, which was discussed in his paper published in the *Proceedings* for last year.

*Mr. Boyd P. Rothrock (Pennsylvania State Museum).*—"Since Mr. Baker explained his hanger at our meeting last year, I have made some experiments with it which I have found to work splendidly. I used it on some very large specimens to test its holding qualities. I find it holds perfectly if the size of the screw and the plate is in proportion to the specimen. It was very satisfactory with us."



In the course of further discussion the difficulty of mounting labels for the equal convenience of children and adults was considered at some length. The consensus of opinion seemed to be that separate children's museums, such as that in Brooklyn, are desirable or, if these are impossible, separate departments for children. Mr. Henry R. Howland then described the labels used in the Museum of the Buffalo Society of Natural Sciences, many of which are printed in white letters upon a gray background. Some difference of opinion was developed regarding the relative advantage of labels of this character as compared with those printed in black on white paper. Dr. A. R. Crook reported that a series of five hundred experiments, made by Professor Scott of Northwestern University, with various colors of lettering and background, indicated conclusively that the black letter on a white background makes the quickest and most permanent impression upon the mind. Dr. O. C. Farrington spoke of the necessity of securing harmony between the label and the background of the case, as well as mere legibility. Mr. H. E. Sargent emphasized the necessity of a careful choice of type face for labels and proper spacing between letters and words.

The following paper by Dr. George F. Kunz, honorary curator of gems, American Museum of Natural History, was then read in his absence by the Secretary:

#### MUSEUM COÖPERATION IN THE HUDSON-FULTON CELEBRATION OF 1909<sup>1</sup>

At every world's fair that has taken place in the past it has been customary to erect museum buildings for the exhibition of objects of historical, archeological, or art significance, the latter consisting principally of paintings. During 1907, when the project of the great Hudson-Fulton Celebration was under consideration, the writer felt

---

<sup>1</sup>For further information on this subject, see:

KUNZ, GEORGE F. Hudson-Fulton Celebration, 1909. *Pop. Sci. Mo.*, vol. 75, Oct., 1909, pp. 313-337, 20 ils.

HALL, EDWARD HAGAMAN. Hudson-Fulton Celebration, 1909. Fourth annual report of the Hudson-Fulton Celebration Commission. Albany, 1910. 2 vols., pp. xiv + 1420, 200 pp. of ils.

KUNZ, GEORGE F. Hudson-Fulton Celebration, 1909. A collection of catalogs

that it would be much better to utilize the twenty-five or more museums in Greater New York than to erect any new buildings. The plan was carefully considered by the Commission, with the result that two committees were formed; one for historical exhibits and the other for art, at the Metropolitan Museum of Art. Of the twenty-five museums, twenty-two took part. The total expense to the Commission amounted to \$22,000. The result was that the authorities of the museums, as well as those of the Botanical Garden and the Zoological Park, and also the Department of Parks, were induced to further the great exhibits and to make them accessible to all who were in the city, or were likely to visit it during the three months from the end of September to the end of December.

The success was unparalleled and, as a suggestion for other cities, it was thought well to give a summary indication of the exhibits, their locations, the hours of opening, and the moral effect of these displays upon the public. Those who had charge of the special exhibitions of the different museums, institutions, and societies, have kindly communicated many important details as to the space occupied, the number of visitors, etc. In several instances the museums have received immediate encouragement in the form of gifts and donations. They were popularized to a greater extent than ever before, and are better understood by many thousands of citizens who had never been in certain of them before the Hudson-Fulton Celebration occurred.

We have all read of the Indians who were settled on Manhattan Island before the arrival of Henry Hudson, but few realize how many relics of these aborigines have been found here, especially at the upper end of the island. A large and valuable collection of these relics was shown at the American Museum of Natural History, at Central Park West and Seventy-seventh Street. This exhibition, which will be permanent, was opened September 15, a considerable part of the ground floor being devoted to it. It was open on week days from 9 to 5; on Sundays from 1 to 5. Many teachers brought entire classes to see the exhibits which were also made the basis for lectures delivered

---

issued by the museums and institutions in New York City and vicinity under the auspices of the Hudson-Fulton Celebration Commission. 400 copies issued.

For further descriptions of museums mentioned in this article, see:

REA, PAUL M. Directory of American Museums of Art, History, and Science. *Bull. Buffalo Soc. Nat. Sci.*, vol. x, 1910, pp. 1-360.

under the auspices of the board of education. A classic monograph by Mr. Alanson Skinner, of the department of anthropology in the Museum, describing the Indian relics of the time of the discovery of Manhattan Island, was published for the occasion. It comprises fifty-four pages and is illustrated by twenty figures.

The special exhibit in the rooms of the American Geographical Society, 15 West Eighty-first Street, covered about 1572 square feet. It consisted of rare books, maps, etc., relating to Henry Hudson, Robert Fulton, and their times. These were shown for thirty days, the hours being from 9 to 5. A catalog of forty-one pages was issued, giving a detailed description of the objects and containing five reproductions of the title pages of rare books. This catalog can be had on application to the librarian.

In the Engineering Building, 29 West Thirty-ninth Street, the American Society of Mechanical Engineers exhibited a collection of models of the first vessels to which steam was applied for navigation, and also models of the latest steamships, thus illustrating the immense changes which have taken place in one century. About 700 square feet of floor space was devoted to the exhibition, which lasted from the middle of September to the middle of October, during which time it was open from 9 to 5.30, and was viewed by about 500 persons, all of whom expressed and displayed great interest.

The special exhibition at the Brooklyn Institute, Eastern Parkway, was open from 9 to 6 on week days, from 2 to 6 on Sundays, and on Thursday evenings from 7.30 to 9.30. Here were shown reproductions of the animals of Long Island and implements used by the Long Island Indians. Nearly 2000 square feet of space was occupied by the exhibition and during September and October there were 50,000 visitors. In the Children's Museum a collection was shown covering 150 square feet, and this was visited by 20,000 persons. Much interest in the history of Hudson and Fulton was expressed by all visitors.

In the City History Club, 21 West Forty-fourth Street, a collection of illustrations, photographs, maps, and plans was exhibited during the month of October. It occupied 500 feet of floor space and was seen by over 150 persons, whose attention was directed to the Historical Guide Book of the City of New York published by the Club.

The College of the City of New York, at St. Nicholas Avenue and One Hundred Thirty-eighth Street, exhibited in the historical museum



of the institution, for several weeks, a collection of charts, views, manuscripts, and relics representing Old New York.

At Fraunces Tavern, 54 Pearl Street, erected in 1719, and restored by the Sons of the American Revolution in 1907, Revolutionary relics were shown daily, except Sundays, from 9 to 6. There were about 150 visitors.

The Long Island Historical Society, at the corner of Pierrepont and Clinton Streets, Brooklyn, exhibited a small collection. The location was too remote to attract many visitors, but some 50 persons viewed the exhibition which was open from 8.30 to 6.

In the National Arts Club, on Twentieth Street, near Irving place, where Samuel J. Tilden once resided, could be seen a most original and attractive exhibition entitled "Three Centuries of New York." This occupied some 3800 square feet of floor space and was open for six months between the hours of 10 and 6; it was seen by about 10,000 persons, and was very highly appreciated by the visitors.

The Aquarium Building, in Battery Park, open daily, including Sundays, from 9 to 5, attracted 396,887 visitors during the two weeks of the special exhibition. On September 26 there were 64,795 visitors. The tanks containing fish native to the waters about New York City were appropriately marked, and this served to attract the attention of those present to our resources in this respect.

The exhibition in the New York Botanical Garden, in Bronx Park, continued from the first of September to the middle of December, and extended over 200 acres. The museums were open daily, including Sundays, from 10 to 5, and the conservatories from 10 to 4; the grounds were always open. In the grounds and conservatories were exhibits of plants, shrubs, trees, and natural woodland; in the museums were shown products utilized in the arts, sciences, and industries. All trees growing in the Hudson Valley at the time of Hudson's arrival were marked with the letter "H." A descriptive list of the native trees was prepared for the celebration by Mr. Norman Taylor. There were 150,000 visitors and all showed marked interest in our native trees.

The Department of Parks placed tree-labels on the trees in many parts of Brooklyn and Queens boroughs; an additional sign reading, "This species is a native of the Hudson River Valley," was affixed to specimens of the species indigenous to the Hudson Valley in 1609. In this way millions of casual passers-by were made familiar with the trees of our land.

In the rooms of the New York Genealogical and Biographical Society, 226 West Fifty-eighth Street, there was a special exhibition of old deeds, manuscripts, etc., relating to the history of the United States, up to and including the war of 1812. This was open daily, except Sunday, from 10 to 5, and continued from the latter part of September to the first of November.

In the building of the New York Historical Society, 170 Central Park West, was shown a fine collection of portraits of Robert Fulton, and many other objects illustrating the life and times of both Hudson and Fulton. This special exhibition covered an extent of 3000 square feet and was open from September 27 to October 30, 1909, including Sundays, from 9 to 5. There were 2036 visitors. The catalog forms an octavo of sixty pages and has as frontispiece a handsome colored print of Thomas Sully's portrait of Robert Fulton.

The special exhibition in the Lenox Branch of the New York Public Library was open during the months of September, October, and November, 1909, daily, except Sundays, from 9 to 6, and occupied 3612 feet of space. The number of visitors was about 5000. Here could be seen prints, books, manuscripts, etc., relating to Henry Hudson, the Hudson River, Robert Fulton and steam navigation. A catalog embracing 745 items was issued.

In the New York Zoological Park could be seen the various species of birds and mammals native to Manhattan Island and its immediate vicinity. The Park was open daily, including Sundays, from 9 until an hour before sunset. From September 25 to October 9, the number of visitors was 76,036. A special guide book, written by Dr. William T. Hornaday, consists of forty-six pages and contains seventy-one illustrations.

The Reformed Protestant Dutch Church of the City of New York made an exhibition of relics connected with the long history of the church, which was founded in 1628, and represents the earliest religious organization in the city. These objects were shown in the Chapel of St. Nicholas, corner of Fifth Avenue and Forty-eighth Street, and the exhibition was open to the public from 9 to 5 daily, during the period of the celebration.

In Richmond Borough, a collection of Indian implements, weapons, etc., from various parts of Staten Island, was shown by the Staten Island Association of Arts and Sciences, in the Borough Hall, New Brighton, Staten Island. It was open every afternoon from 1 to 5, except Sundays, Mondays and holidays; on Saturdays it was open

from 10 to 5. The extent covered was 1875 square feet and the number of visitors from September 4 to November 1, was 1511.

The special exhibition in the Van Cortlandt House, in Van Cortlandt Park, lasted from June to November, and attracted 3000 visitors in a single day. It was open daily from 9 to 5 and comprised Wedgewood medallion, and mezzotint portraits of illustrious persons who lived prior to the Revolution, cartoons and caricatures of political events, etc.

Washington's Headquarters, the old Jumel Mansion, situated in Roger Morris Park, Edgecomb Road and One Hundred Sixty-second Street, was visited by about 3600 persons during the month of October. The building was open daily, including Sundays, from 9 to 5. No special exhibition was shown here, but the fine Colonial furniture, pictures, etc., in the house were well worth a visit.

The most important of the special exhibitions which were organized by the Art and Historical Exhibits Committee, was the magnificent collection of masterpieces by Dutch painters shown in the Metropolitan Museum of Art, at Fifth Avenue and Eighty-second Street. Never before had so many splendid examples of Dutch art been gathered together in the United States; indeed, the exhibition as a whole has never been rivaled even in Europe. There were thirty-five Rembrandts—a larger number than exist in any permanent collection, except that of the Hermitage in St. Petersburg—nineteen portraits by Franz Hals, five specimens of the work of Vermeer van Delft, whose pictures are extremely rare, and pictures by Jacob and Salomon Ruysdael, Cuyp, Hobbema, Metsu, Van Ostade, and many others who were contemporaries of Henry Hudson. These works came from the finest private collections in the United States and many years will pass before an equally favorable opportunity will be afforded for the study of Dutch pictorial art.

The special exhibition also embraced a large and valuable collection of furniture, silver, pewter, porcelain, and glass, produced in this country between 1625 and 1815, the year of Fulton's death; and a fine collection of paintings by American artists born before 1800, including pictures by Woolaston, Copley, West, Allston, Peale, Stuart, Trumbull, Fulton, Doughty, etc.

These special exhibitions occupied 9070 square feet of space, and were open from September 30 to November 30, 1909, the hours being from 10 to 6 on week days and from 1 to 6 on Sundays; on Saturday the building was open until 10 p.m. During this period there were

300,775 visitors. The value of the exhibitions for the study of Dutch art, and of the work of Colonial silversmiths, was generally recognized as very great.

Following is a summary of special Hudson-Fulton exhibitions in the City of New York:

INSTITUTIONS	DATES	SQUARE FEET	ATTENDANCE
American Geographical Society.....	About 30 days..	1,572	1,000
American Museum of Natural History.....	Sept. 15-Oct. 15	450	73,714
American Society Mechanical Engineers....	Sept. 15-Oct. 15	700	500
Brooklyn Institute Arts and Sciences.....	Sept. and Oct....	2,000	50,000
Brooklyn Institute, Children's Museum....	Sept. 1-Dec. 15.	150	20,000
City History Club.....	October.....	300	160
College of the City of New York.....	Sept. 25-Oct. 9.	250	2,000
Fraunces' Tavern.....	2 or 3 weeks....	200	2,500
Long Island Historical Society.....	3 months.....	40	50
Metropolitan Museum of Art.....	Sept. 30-Nov. 30	9,070	300,775
National Arts Club.....	6 months.....	3,900	10,000
New York Aquarium.....	Sept. 26-Oct. 9.	10,000	369,887
New York Botanical Garden.....	Sept. 1-Dec. 15.	50 acres	150,000
New York Genealogical and Biographical Society.....	Sept. 30-Nov. 1.	1,000	300
New York Historical Society.....	Sept. 27-Oct. 30	3,000	2,036
New York Public Library, Lenox Branch...	Sept., Oct., Nov.	3,612	5,000
New York Zoological Park.....	Sept. 25-Oct. 9.	50 acres	76,036
Reformed Protestant Dutch Church.....	6 days.....	200	1,000
Staten Island Association Arts and Sciences.	Sept. 4-Nov. 1.	1,875	1,511
Van Cortlandt House.....	June-Nov.....	3,000	<sup>1</sup> 5,000
Washington's Headquarters.....	October.....	3,200	3,600
		<sup>2</sup> 44,519	1,075,069

<sup>1</sup> 3,000 in one day, nearly 300,000 for the year.

<sup>2</sup> Not including Botanical Garden and Zoological Park.

*Treasurer Wilson.*—"Mr. President, I think this paper is in a way one of the most interesting that I have listened to, and I simply want to impress upon us all the possibility of museum directors and museum people making their own special field interesting by labeling trees and localities of historical interest and by doing anything which will make our cities and villages more interesting and attractive to visitors.

It is a missionary enterprise in which I think we all ought to engage and one which would make the Baedeker of the United States ten times more interesting."

*Mr. Frank C. Baker (Chicago Academy of Sciences).*—"I think this paper illustrates also, Mr. President, the value and utility of our museums in illustrating current events. Many museums do not pay much attention to that, but I think they ought to do so. I know that my museum—and, I presume, many others—did not pay any attention to the comet which visited us recently, and yet there was an opportunity which if embraced would have made the museums more popular. The American Museum seems to be the only one, as far as I know, that really recognizes that phase of the subject. There seems to be nothing going on that Dr. Bumpus does not emphasize to its fullest extent in that museum. At the time Peary attained the north pole he had a whole room exhibiting arctic features and giving the public an idea of that big region; and I think all our museums should keep up with current events and let the people know that they have something beside a storehouse of prehistoric relics."

*Treasurer Wilson.*—"It ought to be stated that you could see Halley's comet in the American Museum certainly four months before it came into view."

*President Lucas.*—"One thing which might be said on behalf of other museums, is that we do not always have the almost infinite resources of the American Museum. Some of us would like to do more. Apropos of this paper and the question of labels, I might mention the evolution of the tree labels. The first labels prepared for some of the parks read in this way: 'White Oak; indigenous to the Hudson River Valley at the time of Hudson.' It was pointed out that if it was indigenous to the Hudson River Valley in the time of Hudson, it was indigenous at any time, so they struck that out. Then the question was asked, how many of the people who read that label could understand the meaning of the word 'indigenous,' so the label as finally prepared read, 'A native of the Hudson River Valley.' "

*Hon. T. Guilford Smith (Buffalo Society of Natural Sciences).*—"Some time ago, I think a year ago, with a view to making known to the citizens of Buffalo what they had here in the way of a museum, the Buffalo Society of Natural Sciences joined with the Public Library up-stairs in issuing a pamphlet, free to the public, showing what was to be seen in this building. The Historical Society issued a similar



pamphlet. It was a sort of guide to the citizens of Buffalo and to others as to what could be had here, and which might become a nucleus perhaps of a municipal university. Carrying out that idea, and taking advantage of the meeting of this Association, there has been prepared a pamphlet which you have found with your other papers in reference to the Buffalo Society of Natural Sciences, setting forth what we have that we think is worth your attention. I suppose the same will be found at all the other institutions which you visit, and all of them collected will make a sort of hand-book, when we are through, for the guidance of those who wish to receive a certain amount of instruction, and who cannot afford to pay for it."

*Dr. Arnold E. Ortmann (Carnegie Museum).*—"The question of labeling trees recalls to my mind a little experience I met with this spring. While trying to penetrate the dark wilderness of Pennsylvania I struck the Mason and Dixon line, and talked with a farmer who told me that was the point where these two men, Mason and Dixon, when they measured this line from east to west, were compelled to retire and run away from the Indians. I asked him, 'Where is that place?' 'Oh,' he said, 'it used to be marked by a big tree standing on a farm owned by a man named So-and-so, and that was where their last camp was.' 'Well,' I said, 'can I see that tree?' 'No,' he said, 'they cut it down last year.' Now that is a little thing, but I should say that the tree which marked the site of the last camp of Mason and Dixon was an interesting historical point, and such a tree should be preserved and marked, and should not be suffered to be destroyed by the man who simply wanted to make use of the lumber. I would like to ask whether in a case like that it is possible for the American Association of Museums, or for any individual museum, to take steps to preserve and label things which are of historical or scientific interest but which are too large to be brought into a museum and exhibited there. I mention in this connection that in Germany there is a great association which has exactly this purpose. There are beautiful sceneries and historical objects which might go to destruction without the care of some association. It always tries to get property rights, to fence them in so to speak, label them, make them accessible and intelligible to the public, and to preserve them as long as they can be preserved. I think that might possibly be one of the objects of the American Association of Museums, and I only wish to offer this suggestion with the hope that some one else may have something to say on the subject."

*President Lucas.*—"I am sure Dr. Ortmann will be very glad to know that Dr. Gilman, who last year had a paper on the preservation of local monuments, was to have been heard on the same subject at this meeting. His paper would have read: Museum Registry of Local Art<sup>1</sup>, and it is a pity, as Dr. Ortmann says, that so many of our monuments, natural and artificial, should be destroyed simply because people want the brick, stone, or lumber for their own personal uses."

*Miss Alicia M. Zierden (Pennsylvania State Museum).*—"Local historical societies are doing a great deal of that work, and it might be that in combination with them more could be done."

*Mr. Baker.*—"This subject should be taken up by each local museum which should take care of its particular neighborhood."

*Dr. S. A. Barrett (Milwaukee Public Museum).*—"One obstacle to the preservation of local monuments and similar things by local museums is that, as far as I am aware, there is no other means than direct purchase of obtaining property rights, or giving a museum absolute dominion and control over the particular monuments in question. There is a way in which the government might take it up, as, if I am informed correctly, is done in Mexico. The pyramids and monuments found here have been taken under government control. The country being covered in many regions by a jungle, these monuments may not be known. A person or company acquiring title to a tract of land and proceeding to exploit it may suddenly come upon some ancient temple or monument of one sort and another. In this case it is provided by law that all such monuments, with a certain acreage, shall immediately revert to the government, the lawful owners being indemnified in cash or by an equally valuable piece of land in another section. The government of the United States has taken one step toward this in providing for the preservation of cliff dwellings and other things of that sort in the Southwest, where still on government land, but I know of no provision for acquiring these cliff dwellings and other monuments which are on private property, though, according to the Mexican system, these would revert automatically to the state."

*Mr. Henry R. Howland (Buffalo Society of Natural Sciences).*—"I would like to say that the American Archeological Society is very busily engaged in just that sort of work, and I presume later they

---

<sup>1</sup> Mr. Gilman's paper was subsequently read by Mr. Louis Earle Rowe, and is printed on pp. 84-87.



are hoping to secure and preserve as many as possible of the monuments which are now in private possession."

*Mr. Herbert E. Sargent (Kent Scientific Museum, Grand Rapids).—*"I would like to have passed, to take back to Grand Rapids a resolution of this Association requesting the coöperation of museums and communities in this work, because we have in our vicinity what has been pronounced by one of the leading archeologists to be one of the finest groups of mounds in the United States, some of them twelve, fifteen, and sixteen feet high. Half of these mounds are owned by a good roads corporation for the sake of their preservation. The other half are not. In the name of science I should like to see the will of this organization expressed to the end that these things may be locally preserved. I think it would be a good principle, even if we could not go further than to adopt the resolution."

*Mr. William C. Mills (Ohio State Archeological and Historical Society).—*"I wish to say that the State of Ohio, at the present time, has full possession of Fort Ancient. We have been trying to purchase this tract for the last fifteen years, and have finally accomplished it. You all understand that the very moment a state or institution undertakes to purchase any historical spot, the price immediately goes up. About ten years ago the State attempted to purchase Fort Ancient. We were able to get about a hundred acres of it, and a little later we got perhaps another hundred acres at almost double the price of the first; then for ten or twelve years some twelve or fifteen acres were held at \$100 an acre, whereas they were not worth \$10 because the land was rough and stony and could not possibly be used for any purpose except that of the Society. After a time a portion of it was laid out into lots and some of it sold, which made it more difficult for us to obtain. We finally cleared it up last year, and now have more than three hundred acres under our care and direction. The State cares for it properly and we provide a custodian. It is free to all visitors and is accessible by a short walk from the station at Fort Ancient to the top of the hill.

"We also have the Serpent Mound Park of some seventy acres, which is kept up by the State. You may remember that a few years ago this park was purchased by Harvard University, which found it impossible to look after it and therefore agreed to turn it over to the State of Ohio. The State Archeological and Historical Society now has charge of it and has erected a large tower from which one can see the entire Serpent at a glance. This is, however, seven miles from the

railroad and not easily accessible, but we have a house on the property to accommodate any one compelled to remain over night.

"We have lately acquired other historical places in the State. Big Bottom Park, noted as the scene of a massacre in early days, has been deeded to us, and Colonel Hayes, son of President Hayes, has lately deeded to us a part of the old Harrison Trail in the old original forest. Colonel Hayes has also given liberally toward the betterment of this part of the Park, and we expect to spend several thousand dollars in preparing it for the public.

"There are several other monuments that we wish to obtain. One in particular is the large mound at Miamisburg. Some years ago a committee of our legislature appointed myself and a few others to visit the place and pass on the actual value of the ground and surroundings. After looking over the ground, we came to the conclusion that \$75 an acre was a fair value, when only \$50 or \$60 an acre was asked for the surrounding farms. But when we attempted to purchase, the price immediately went up to \$150 an acre, and the legislative committee found there was no use in negotiating for objects of this kind. All these considerations enter into the question of preserving monuments of this class."

*Treasurer Wilson.*—"I want to suggest a remedy which can, I believe, be easily arranged for just such cases as have been mentioned, and that is the passage of a law which would allow the condemnation of property for such purposes at a reasonable price. I think that could be done in any state."

*Secretary Rea.*—"There is appointed for the session to-morrow morning a round-table discussion of the relation of our Association to historical societies and museums. I think this might very well include archeological societies and museums, and I simply offer the suggestion that if any one cares to prepare such a resolution as Mr. Sargent mentioned, it might be presented at the round-table discussion to-morrow. It would be a very favorable time, it seems to me, to take up such action."

*Dr. Barrett.*—"I would be inclined to add to that resolution, or suggest the presentation of another recommending either to the central government or the state governments the passage of just such a law as that mentioned, which would enable them to condemn property. In Wisconsin there are many perfectly preserved mounds, some of very rare form, and as far as I am aware there is no possible way in which a historical society, museum, or any organization whatsoever can obtain possession of them."

*Secretary Rea.*—"Mr. President, I move that the Chair appoint a committee to prepare for the session to-morrow morning the two resolutions desired."

The motion was duly seconded and carried, and the Chair appointed Mr. Mills, Dr. Barrett, and the Secretary to serve on this committee.

The Association then adjourned to inspect the museum of the Buffalo Society of Natural Sciences. At half past one luncheon was provided at the Lafayette Hotel by the three Buffalo societies, after which members were conveyed by motor cars about the city and through the parks to the Country Club where tea was served and a game of polo arranged by courtesy of members of the Club.

## SESSION OF TUESDAY, MAY 31

### *Evening*

President Lucas called the meeting to order at 8 p.m. in the rooms of the Buffalo Society of Natural Sciences.

The first paper to be presented was by Mr. Frank C. Baker, curator of the Chicago Academy of Sciences.

*Mr. Baker.*—"I wish to preface my remarks, Mr. President, ladies and gentlemen, by saying that the present policy in connection with the public schools has been forced on us by the Chicago school teachers, and we have met that demand as best we could with our standard resources, and you will see from what I read and what I show how well or how ill we have done that."

## SCHOOL LOAN COLLECTIONS AS PREPARED BY THE CHICAGO ACADEMY OF SCIENCES

It is evident that the majority of American museums are passing through a period of active evolution (perhaps we should call it mutation). There seems to be, also, a growing feeling among museum men that their institutions are not living up fully to their opportunities in the matter of providing information and intellectual recreation for the public. The evidences of this evolution are seen in the more concrete museum exhibits, in the elimination of the technical label, and in the preparation of special collections illustrating current events. In no department of the museum is this evolution so marked or so revolutionary as in its relation to the public school. The need of

material with which to illustrate nature-study lessons is keenly felt in the schools, the teachers having usually neither the ability nor the inclination to secure this material themselves, and without the actual specimens the teaching of nature is time wasted. It is here that the work of the museum becomes intensive, providing, as no other institution can, abundant illustrative material for the successful teaching of nature.

A few museums, among which may be mentioned the American Museum of Natural History, of New York, the Philadelphia Museums, the Milwaukee Museum, the Carnegie Museum, and the Buffalo Society of Natural Sciences have embraced the opportunity and are greatly aiding the departments of public instruction in their respective cities. I regret to be compelled to say that Chicago, the city which is in the lead in so many lines of human endeavor, has not, until recently, seriously considered the matter of providing material for this purpose, although one of her suburbs, St. Louis, has built up one of the largest and most complete systems of traveling exhibits in the country. This educational museum, however, is a department of the St. Louis Board of Education, and cannot strictly be classed with the museums previously mentioned.

During the past year the Chicago Academy of Sciences has been building up a system of loan collections illustrating both nature-study and geography. These collections have proven of considerable help to the Chicago teachers, who have freely availed themselves of the aid thus provided. As this work is at present carried on without assistance from the board of education, the question of transportation was at first somewhat of a problem. This was happily solved by the use of two boys from the upper grades of each school, who have transported the boxes from the museum to the school.

It is pleasing to note that there is not a particle of enforced obligation imposed upon the teacher by the board of education, the use of the collections, as well as the attendance at the lectures given by the Academy to both teachers and pupils, being entirely voluntary. That such a large measure of success should have followed our efforts in this direction, when this fact is borne in mind, surely augurs well for the future of nature-study in our city.

A study of the loan collections provided by other museums, together with a somewhat exhaustive survey of the present condition of nature-study in the Chicago schools, made it apparent that our loan collections, of nature, at least, must be arranged definitely in sets, and must

be accompanied by literature more or less extensive to be of much practical use in the Chicago schools. Accordingly, the birds were arranged in sets illustrating such topics as "Winter Residents," "Residents," "Summer Residents," "Early Spring Arrivals," "Migrants," "Birds of the Air," "Birds of the Swamp," "Birds of the Great Lakes," "Seed-eating Birds," "Birds of Prey," "Swimming Birds," "Wading Birds," etc. Among the lower forms of life such subjects as the following were chosen: "Metamorphosis of a Beetle," "Metamorphosis of a Butterfly," "How Insects Hide," "Some Common Butterflies," "Grasshoppers and Dragonflies," "Ants, Bees and Wasps," "Flies, Beetles and Bugs," "Spiders," "The Pearly Nautilus," "Frog-shells and other Snails," "The Oyster and its Relatives," "Beautiful Shells of the Tropics," "Wood-Snails and Tree-Snails," "Barnacles," "Crabs," "Starfishes and Sand-dollars." A collection of fishes and one of mammals were also prepared.

In the case of the geographic collections the manufacturers have been interested and have furnished an abundance of material illustrating such industries as, "Pearl and Ivory Buttons," "Abrasives," "Aluminum," "Iron and Steel," "Silk," "Cotton," "Flour," "Grain," etc.

The problem of properly boxing each collection was given considerable study. The first requisite was to secure adequate protection for the material; the second, to provide enough material to satisfactorily illustrate the subject. In the case of the birds, it seemed evident that six specimens were about as many as could be advantageously used in one lesson. The boxes, therefore, were made of such size as to accommodate six birds. Each bird was mounted on a natural branch which was securely fastened in either a round or a square base. Each base was made to slide between grooved runners which were fastened to the front side of the box, allowing the specimens to be taken out when the cover was turned back. To prevent the round bases from turning when in the groove, two small brads were driven into the upper surface of the base, permitting the base to slide in and out easily. These bird boxes were made of seven-eighths inch poplar, nineteen and a quarter inches long by fourteen inches high and thirteen and one-half inches wide; the finish consisted of shellac and varnish. Handles were provided at either end; the cover, which was two inches in depth, was secured by fastenings similar to those used on suit cases. These boxes hold the birds so firmly that they can be rolled about and stood on either end or side without damage to the contents.



The geographic collections are transported in smaller boxes of thirteen by nine by fourteen inches dimensions, the handle in this case being on the cover. These boxes are divided into compartments in which the specimens are placed, the smaller specimens being fastened to heavy cardboard. The covers of these boxes are used for the storage of such literature as may be needed.

During the year 1909, thirteen hundred thirty-three specimens were loaned to the schools in the vicinity of the museum. During the five months of 1910 (January to May inclusive) nearly one thousand specimens have been loaned to schools of the north and northwest sides of the city, and present indications lead to a belief that during the fall and winter months the demand for illustrative material will be larger than can be met.

At the present time about two thousand specimens are available for loan purposes. Plans are now under way to increase this number very largely so that these collections will embrace the principal food products, clothing material, fibers of various kinds, woods, plants, minerals, geographical and zoological specimens, physiographic models, lantern slides, charts and photographs. It is hoped that this work may be developed to such an extent that any nature-study or geographic subject taught in the public schools may be illustrated by collections of greater or less extent.

In planning work for the advancement of nature-study in our city the fact has been constantly borne in mind that our teachers are much overburdened with school duties and we have realized that any additional responsibilities must be shown to be of real value and help to the teachers if they are to enter heartily into these new relations. With this point of view in mind, the endeavors of the Chicago Academy of Sciences have been directed mainly to placing such material in the teachers' hands as will render the teaching of nature-study or geography more interesting and, hence, easier, and also to providing the opportunity for further advancement by the presentation of university extension courses as well as other lectures not of a credit character, for both teachers and pupils.

The field which the Academy has now entered is wide, and its possibilities are seemingly endless. As the work grows in magnitude it will probably be found necessary to abandon some lines of work which have been heretofore considered of paramount importance in the work of an academy of science; but the satisfaction gained from the realization that these new lines of work are reaching and influencing

the children in a city of two million inhabitants will more than compensate for this sacrifice. No better way of providing for the future of scientific institutions can be imagined than that of interesting the children, who but a few years hence will become the men who will be in a position to endow our educational institutions as well as to become members of boards of trustees and boards of education, by whose wise encouragement the scientific spirit may be spread and caused to bear much fruit, which shall make for themselves and others the joy of living greater and sweeter.

---

In response to questions Mr. Baker stated that about twenty of these boxes are now in circulation and that new sets are provided as the demand increases. There are no duplicates, but these will be provided as needed. The applications have not exceeded the present supply and it is evident that the teachers need to be educated in the use of these collections. In the past year about forty out of the two hundred schools in Chicago have availed themselves of this opportunity and Mr. Baker considers this a very satisfactory beginning. The wear and tear on the specimens is found to depend upon the care which the teacher takes of the collection. The number of birds seriously damaged during the year has hardly exceeded a dozen.

Mr. Douglas Stewart described similar exhibits used by the Carnegie Museum in which the specimens are enclosed in glass boxes. Mr. Baker considered it better to replace specimens when necessary rather than to enclose them in any way and emphasized the desirability of teaching children to handle specimens with proper care. The box described in the paper was said to cost about \$3.50 while the cost of the contents make the total value of the exhibit approximately \$25. Similar boxes are used for the economic collections, such as the pearl button industry of the Mississippi River. The boxes have always been returned promptly in Chicago but Mr. Henry L. Ward reported that teachers in Milwaukee were sometimes highly indignant when asked to return specimens which they had had for a month. Mr. Baker stated that he had experimented with the use of bird skins in these loan collections but had found that mounted specimens were much preferable.

Mr. Howland described the relation of the museum of the Buffalo Society of Natural Sciences to the city schools, stating that the grammar school children from the fifth grade up visit the Museum in



accordance with a regular schedule prepared by the superintendent of education for the study of physiology, birds, bees, tropical products, geography, etc. Mr. Baker said that the board of education in Chicago is entirely neutral in this matter, going no further than to sanction the use of the museum collections.

Dr. John M. Clarke of the New York State Museum expressed his fear that the extensive use of loan collections of birds involves the taking of so many specimens of birds and eggs as to constitute a serious menace to bird life, surpassing in this respect the damage done by wanton destruction. Mr. Baker believed that the number of specimens taken for school use is infinitesimal in comparison with the number which die from natural causes and that the study of birds discourages the shooting of birds by children. He agreed, however, to the damage caused by wholesale collecting of eggs or large series of specimens for the study of variation.

*Secretary Rea.*—"This discussion leads me to speak of one phase of museum educational work which I think may be very profitably carried out in small communities, and one which must have some influence in larger communities. In Charleston, S. C., I know very well that the influence of the Museum teaches young boys who are interested in collecting that the Museum collects for the community and is the natural repository for rare or interesting specimens. As a result they not only bring to the Museum specimens which they think may be valuable enough to go into its collection, but they are being gradually trained not to shoot birds for their own use, because if there is any need of taking specimens, the museum will take them for the community. I think this is a feature of our work which we ought to emphasize, that the community is represented by the museum, that the presence of a museum in a community makes it inadvisable that there should be many private collections unless there be some special reason for their existence. I think it is possible to obtain this result in the smaller places where the influence of a museum is felt throughout the community."

*Mr. Henry L. Ward (Milwaukee Public Museum).*—"I feel that what Mr. Baker said in regard to the influence that the dissemination of these collections has in restraining school boys from the use of slingshots is true, and that this influence for the preservation of birds much more than counteracts the killing of all the birds for distribution. In Milwaukee we distribute a great many birds in this way, and each is accompanied with considerable information regarding its life

habits and economic value, which is brought out prominently just in order to have this influence on the children—to show them that this is a valuable thing, an animal that is doing valuable work for the community and one which ought not to be killed. We have encouraged the children to bring in specimens. We like to have the children and the whole community feel that it is their museum, and that they are helping to build it up. We often have twenty or more birds brought in in the course of a day, particularly during the spring migration—birds that have flown against windows and been killed, or that have arrived in an exhausted condition and perished from fatigue and cold. If twenty or more birds are brought in in a single day from these causes I do not suppose they represent, probably, a thousandth part of those that are killed within the limits of the city on that day. I think we have a very slight idea of the appalling death rate of birds from natural causes. Personally, I would not be at all surprised to know that on a very stormy day in the spring migration the death rate within the city limits would go up to forty or fifty thousand birds per day. Now, the killing of a few of these birds for distribution to schools would have an imperceptible influence. Of course, if all the small boys should turn loose with sling-shots and should rob the nests, we should have a great deal more to contend with, and for that reason I have consistently refused to circulate bird eggs, because they appeal very much to the small boy's collecting instinct. I have felt that the circulation of bird eggs would be very likely to stimulate his desire to rob every nest that he came across, whereas I do not think that the mounted birds have the same influence, particularly when accompanied with the data that we try to furnish. In our lectures to the schools we again bring out very strongly the economic value of these things."

*Dr. A. R. Crook (Illinois State Museum).*—"Some light is thrown on the relative amount of destruction which this collection leads to when one considers the bird population in any locality. Stephen A. Forbes, of the Laboratory of Natural History of Illinois, has been conducting a bird survey and among other things he has had two young men begin at the southern end of the state and walk four hundred miles, a certain distance apart. From their observations he has come to the conclusion that the bird population of the State of Illinois is about 30,000,000. That shows that there is a supply of birds, I think, for all the ten or thirteen thousand schools that there are in Illinois."

*Mr. Herbert E. Sargent (Kent Scientific Museum, Grand Rapids).*—"I happen to have a few statistics in line with what Mr. Ward has

said. One fall we had a migration of birds when the season opened very suddenly with a severe storm. The next morning we visited half the arc lights in the city and counted five hundred dead birds, which showed that in our community at least a thousand birds met their death that night."

*Dr. Charles F. Millsbaugh (Field Museum).*—"Mr. President, I move that we proceed to the next paper, this not being an ornithological symposium."

The following paper was then read by Dr. Arthur Hollick, curator, department of fossil botany, New York Botanical Garden:

## THE PALEOBOTANICAL COLLECTIONS OF THE NEW YORK BOTANICAL GARDEN

### INTRODUCTION

The New York Botanical Garden, as far as I am informed, is the only institution in America in which paleobotany has been developed as a distinct and separate museum feature, accompanied by courses of instruction in the subject.

Johns Hopkins University offers a full course in paleobotany, recognizing it as coördinate with other branches of paleontology; but the material available for study purposes is not very extensive or comprehensive and is, for the most part, arranged to illustrate stratigraphic sequence rather than biologic significance.

The United States National Museum maintains a section devoted exclusively to fossil plants, in connection with its general paleontological collections, with two custodians who have charge, respectively, of paleozoic and post-paleozoic plants; but the development of the subject is essentially along geologic lines, in connection with the work of the United States Geological Survey.

In all other institutions of which I have any knowledge fossil plants appear to be regarded only as incidental features of stratigraphic or paleontologic collections.

The New York Botanical Garden, alone among its sister institutions, recognizes paleobotany as coördinate with and as the phylogenetic and logical basis of systematic botany, and it has occurred to me that an account of the history, arrangement, and development of the collections in accordance with this point of view might be of interest.

## DESCRIPTION OF THE COLLECTIONS

## ORIGIN AND SUBSEQUENT DEVELOPMENT

The nucleus of the collections is the paleobotanical portion of the general geological material gathered together by the late Dr. John Strong Newberry, formerly professor of geology and paleontology at Columbia University. It was separated from the general geological collections of the University, after the death of Dr. Newberry, and was deposited in the museum of the New York Botanical Garden, under an agreement between the two institutions, dated May 3, 1901, at which time I had the honor to be appointed to take charge of its installation and future development.

During the first six years in the museum of the Garden about one-third of the specimens had to remain in storage by reason of lack of cases; but in 1908 the case equipment was doubled and then, for the first time, it became possible to make an approximate enumeration of the specimens and to arrange all of the collections systematically.

The number of specimens included in the original collections is estimated at about 12,000, and the Garden has added, by purchase, by field work, and through donations and exchanges, about 3000, so that the number of specimens now in the museum may be conservatively estimated at not less than 15,000.

## ARRANGEMENT AND LABELING

The collections are installed in and occupy exclusively the two wings of the main basement hall, the floor of which is at ground level and laid directly on the ground surface. This is the logical location for such collections in the museum, from the standpoint of both systematic scientific sequence and practical museum economy. Fossil plants represent the ancestral rootstock from which our living vegetation has arisen and their proper systematic location is, therefore, in the basal portion of the building, with the collections representing our modern flora on the floors above; while the actual specimens, by reason of their weight should, naturally, be located on a floor laid upon the solid ground.

A large framed placard, attached to the wall, indicates the character of the collections as a whole, viz.:

MUSEUM OF FOSSIL BOTANY  
REMAINS OF EXTINCT PLANTS,  
THE  
ANCESTORS OF PLANTS NOW EXISTING

The floor space included in the two wings is 6072 square feet, all of which is devoted to display cases, with the exception of two portions, each 16 x 15 feet, at the eastern end of the east wing, partitioned off as rooms for the sorting and preparing of specimens.

The floor arrangement of the cases is based upon stratigraphic sequence. Table and wall cases Nos. 1-4 contain plants of Eozoic and Paleozoic time. Table cases 5-9, Mesozoic. Table cases 10-12 and wall case 5, Neozoic. This sequence of the cases, while it is primarily a geologic and phylogenetic one, illustrating the general evolution of the vegetable kingdom from its beginning, as represented by the remains found in the Eozoic crystalline rocks, to recent times as represented by the contents of peat bog and other surficial deposits, is incidentally also a taxonomic one when broadly viewed, inasmuch as the plants lowest in the scale of life predominate in the older geologic periods and the higher types in the more recent ones. In other words, the relative abundance, from the older formations upward, of algae, pteridophytes, gymnosperms and angiosperms, represented in the arrangement of the cases according to stratigraphic sequence, represents also the taxonomic arrangement of the systematic botanical collections on the museum floors above. This scheme of installation and sequence therefore brings the museum collections, as a whole, into one harmonious expression of the principle of evolution in connection with the vegetable kingdom.

Each collection from any limited locality, or made by any expedition from a more extended area, is kept intact in the drawers of the case where it belongs stratigraphically, as nearly as possible; although occasionally the specimens may represent more than one geological horizon. Whenever possible, also, a copy of the report or other publication in which a collection is described or discussed is deposited with it, in order to facilitate reference to descriptions and illustrations. The only exceptions to maintaining the integrity of the collections are that individual specimens may be withdrawn and utilized for display purposes.



Type and figured specimens are designated, respectively, by means of red stars and blue triangles, and display specimens are selected either because of their relative perfection of preservation as a whole, or in order to illustrate some detail of outline, nervation of structure, or for the reason that they express some idea relating to evolution, geographic distribution, stratigraphic type, method of preservation, or some other special feature.

The number of specimens on display is approximately 3700. Two large labels in each case indicate the general geologic age of the contents, viz., Eozoic, Paleozoic, Mesozoic and Neozoic, and the geologic period or periods represented, viz., Laurentian, Silurian, Cretaceous, Tertiary, Modern, etc. Following are some examples of these labels:

PLANTS OF EOZOIC AND EARLY PALEOZOIC TIME:

LAURENTIAN,  
CAMBRIAN, SILURIAN AND DEVONIAN PERIODS

PLANTS OF MESOZOIC TIME:

TRIASSIC AND JURASSIC PERIODS

PLANTS OF NEOZOIC TIME:

QUATERNARY AND MODERN PERIODS

Each specimen, with the exception of the very large ones, is placed upon a separate wooden block with white surface and black sides and front. The front is beveled and provided with a beading along the bottom to hold the specimen label. This label includes the generic and specific name of the specimen; the family, order, or class of plants to which it is referred; the geologic period and subdivision in which it belongs, and the locality or region where it was collected, viz:

FAMILY BETULACEAE	BIRCH FAMILY
CARPINUS FRATERNA Lesq.	
TERTIARY	MIOCENE
FLORISSANT, COLORADO	

FAMILY PINACEAE	PINE FAMILY
PICEA CANADENSIS (Mill.) B.S.P.	
QUATERNARY	GLACIAL
NEW DORP, STATEN ISLAND, NEW YORK	

Whenever a figure of any specimen can be secured it is placed alongside the specimen, on the same block. This is often of considerable importance in connection with an adequate display of fossil plants, as many interesting specimens are too obscure to be readily discerned without close scrutiny and frequently require the use of a hand lens in order to detect details. Many such specimens, some of them types, would be useless for display purposes without the accompanying figures.

These several features of the labeling are thought to include about all the explanatory matter that is required for the information of the average visitor; but experience has demonstrated that there are many who lack even the elementary knowledge necessary to understand what the wording of the labels is designed to express. This matter will be discussed later on.

#### SPECIAL FEATURES

Aside from the educational value of the collections as a whole, in illustrating the ancestry and evolution of our living flora, many of them are, individually, of historical as well as scientific interest, especially those which represent material collected during the prosecution of well-known government explorations and surveys.

Among the latter may be mentioned the collection made in Australia in 1838-1842, by the Wilkes Exploring Expedition, described in the report by Professor Dana, and those secured during the period



between 1855 and 1860 by the Northwest Boundary Commission, between Canada and the United States, and the Pacific Railroad, Macomb, Ives, and Reynolds expeditions, in the western and south-western parts of the United States, which were made the subjects of reports by Professor Newberry.

Also of interest historically are the specimens collected by Professor Newberry about 1850, upon which he based his earliest paleobotanical contribution, "Fossil Plants from the Ohio Coal Basin," published in a series of papers in volumes I and II of the *Annals of Science*, in 1853-1854. These papers are among the earliest contributions to American paleobotany and the specimens represent some of the earliest described American fossil plants.

The entire collection from the Cretaceous of New Jersey, upon which Professor Newberry based his "Flora of the Amboy Clays," issued as Monographs of the United States Geological Survey, volume 26, together with the larger part of the specimens described by the writer in "The Cretaceous Flora of Southern New York and New England," issued as volume 50 of the Monographs of the Survey, form one of the museum features which appears to attract considerable attention and evidently possesses an element of interest by reason of its local character. These specimens include practically all that have ever been collected representing the fossil flora of New York City and vicinity, and those from Staten Island, Long Island, Block Island, and Martha's Vineyard could probably never be duplicated, as they were collected at intervals during the past twenty-five years, at such fortuitous times as the limited plant-bearing beds happened to be exposed, and most of these are now covered up or obliterated.

The value of local collections, in inciting interest and a desire to know more about the objects which may be collected within a relatively short distance from home, can hardly be over-estimated and, in recognition of this fact, two cases devoted to these specimens have been arranged as a special museum feature.

The collections in general, as would naturally be inferred from what has been outlined in regard to the origin of those specially mentioned, are very rich in type and figured specimens. These are being card cataloged as rapidly as circumstances permit and, when the work is completed, these will be arranged alphabetically and printed in pamphlet form for distribution to other institutions and to such persons as may be interested in paleobotanical investigation or research.

The conversion of our modern vegetation into fossil forms; by the various processes of nature, is illustrated by a series of specimens, which include leaves and leaf impressions preserved in pond silt; fragments of vegetation in recently formed sand or clay concretions; contents of peat-bog deposits; wood from swamp and estuary accumulations, partly or completely lignitized or converted into carbon by the process of natural distillation; silicified wood, showing replacement of the tissues through the agency of water carrying silica in solution, and similar specimens showing replacement by iron, lime, or other mineral matter; a variety of plant remains from the vicinity of mineral springs, preserved by incrustation of silicious sinter and calcareous tufa; etc.

This feature is one in regard to which the average person does not appear to be well informed. The popular conception of a fossil is that it is necessarily something very old and that the methods by which it became converted from the living into the fossil form no longer prevail in nature. The fact that fossils are in constant process of formation today, just as they were during every day in the past, is distinctly surprising to most persons, and specimens which demonstrate or illustrate the processes of fossilization are important educational exhibits.

#### GENERAL COMMENTS

The matter of labeling—that is to say the amount of explanation or information which a label may properly contain—is something which I assume has worried everyone who has had anything to do with the installation and display of museum material. Frequently, after time and careful consideration have been given to the selection, arrangement, and labeling of a collection, some remark by a casual visitor will indicate either that the exhibit fails to express the idea for which it was designed, or else that the visitor was lacking in the elementary knowledge necessary for an adequate conception of what the specimens themselves are, or what they actually represent; and the question that constantly presents itself to the curator and demands an answer is: To what extent is it advisable or permissible to go in connection with explanatory matter on labels?

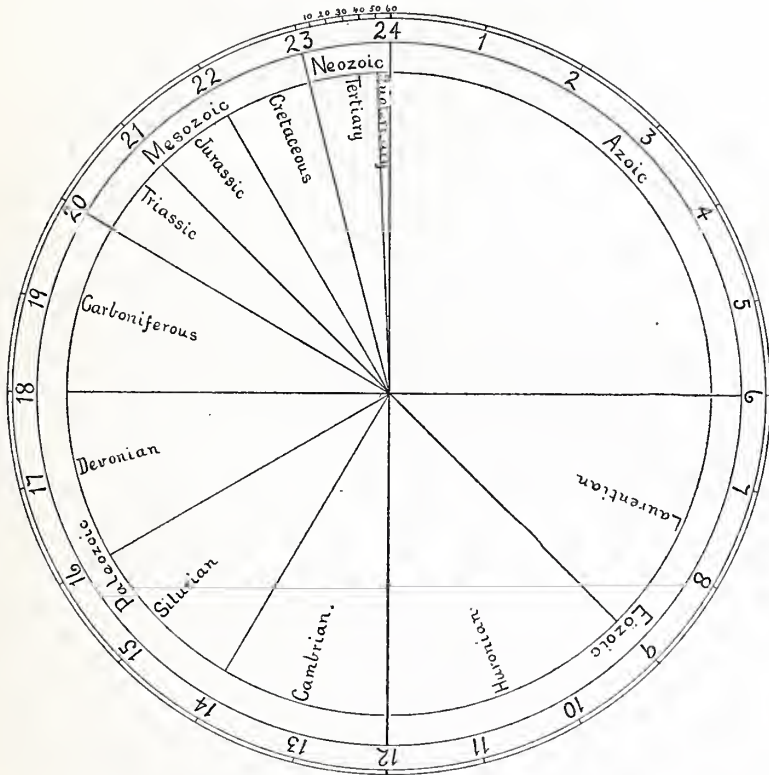
One visitor who chanced to observe me carefully chipping the matrix, with hammer and chisel, from around a finely preserved fossil leaf, remarked enthusiastically to a companion: "How beautifully he engraves that leaf, doesn't he?" However, the visitors who are not

sufficiently well informed to differentiate between a museum of fossil plants and an art gallery are probably very few in number and need not be considered in any scheme of museum economy. Nevertheless, experience has demonstrated that certain factors in connection with fossils in general require careful consideration in regard to explanatory labeling if any display of such objects is to have its proper educational value, even to the person of average information and intelligence. It is not safe to assume the possession, by the general public, of even the most elementary knowledge relating to natural objects.

For example, an astonishingly large number of persons are evidently puzzled over the problem of how a fossil, especially such a fragile object as a leaf or flower, could have become imbedded in solid rock or left its imprint in such hard material. To such persons, of course, some information in regard to the origin of sedimentary rocks is necessary, and some explanation of the difference in origin between sedimentary and igneous rocks, in order that they may not expect to find fossil remains in a trap dyke as well as in the sandstone associated with it, as some occasionally do in connection with the rock of the Hudson River Palisades. How best to impart this information by means of an explanatory chart is something that I have been seriously considering.

Probably the one question which is most frequently asked in regard to a fossil is how old it is, or how long ago in the world's history was the geologic period in which it lived. Disappointment is usually expressed because definite figures in years can not be given. The age of the world, the extent of geologic time, and the slowness of geologic processes, are matters in regard to which most persons apparently have no conception, and a majority are frankly incredulous when tens or hundreds of thousands of years are mentioned in connection with the relatively recent remains of the Quaternary Period, and indefinite millions of years in connection with those which preceded it.

It has occurred to me that possibly a chart, giving the calculations which have been made of time ratios in connection with the primary geologic time divisions, might be utilized in order to convey some idea of this factor, in preference to any attempt to indicate definite figures for the probable antiquity of the several geologic periods. With this idea in view, I have prepared the following chart, adapted from a similar one by Dr. Lester F. Ward:



This chart is based upon (1), an assumed age for the earth of 72,000,000 years, which is a fair average of the numerous estimates which have been made by geologists and physicists in this connection, and (2), the ratios between the several geologic time divisions as estimated by eminent geological authorities.

The clock dial, representing the cosmic day, is divided into twenty-four hours, hence each hour is equivalent to 3,000,000 years of geologic time.

The estimates of the geologic time division ratios are:

Pre-Paleozoic (Azoic and Eozoic) Time .....	12
Paleozoic Time .....	8
Mesozoic Time .....	3
Neozoic Time .....	1

Applying these ratios to the hour divisions on the clock dial we have:

	YEARS
Pre-Paleozoic Time .....	36,000,000
Paleozoic Time.....	24,000,000
Mesozoic Time.....	9,000,000
Neozoic Time .....	<u>3,000,000</u>
	72,000,000

By subdividing each of the time divisions into its appropriate geologic periods the approximate antiquity of each period is indicated.

The even subdivision of Pre-Paleozoic Time into Azoic and Eozoic is purely arbitrary, as is also the indicated time duration of the several geologic periods, except in connection with the Quaternary, which is assumed to include the last 500,000 years of cosmic time, equivalent to the last ten minutes of the twenty-fourth hour, and to represent the period during which man has been in existence.

---

Dr. Charles F. Millspough, curator of botany, Field Museum of Natural History, Chicago, then read the following paper:

#### BOTANICAL INSTALLATION

In the earlier period of museums in America, the then highest muscologist publicly stated that "botanical material could not be made sufficiently interesting to people to warrant space being given to it in a public museum." Within the past fifteen years another museum authority made a statement that "in a public museum of botany systematic material could not be satisfactorily installed in connection with economic." It is in refutation of both these claims that I present this paper. I wish to offer proof that botanical material is essentially interesting to the general museum visitor, and, at the same time, of the deepest educational value to him. I concede that botanical specimens lack, to a large degree, the element that satisfies mere curiosity, yet their high utilitarian character, as the basis of the needs of man, gives them a wider interest than those of any other branch of natural history.

The great question as to the value of botany to a natural history museum lies in the manner of its presentation. A line of demar-



cation has been drawn between systematic and economic material. Purely systematic material includes all that which is intended to illustrate the interrelationship of genera and families—the relationship of each plant to its nearest neighbor—material that is logical, *per se*, to the scientific mind. To be museum material this must also be made logical to the lay visitor. If not so made it should be placed in seclusion, for the use of the student only, not displayed where it will tire and confuse others. There is scarcely a museum in Europe that does not clutter its cases with masses of plant material in pickle—pickles that bear no likeness to the original shape or condition of the plant so far as the average visitor can detect through the discolored liquid in which it is preserved. Economic material consists of all forms of utilized plant products. These specimens can only be of exhibit value when they are ample enough to convey some adequate idea of their character and utility from the mere shape and size of the specimen itself. In addition to the systematic and economic installation, large series of valuable correlative groupings may well be employed, such as: forestry and dendrology; the means employed by plants to disseminate the species; diseases of plants, and those plants causing disease in animals; habit plants; plant structure; plant life; fertilization and cross-fertilization; evolution and mutation; ecology; in fact as many highly educational monographic displays as means and space may permit.

The Field Museum of Natural History is essentially a museum for the public, not, as is the case with most European museums, a display of study material to which the public is grudgingly allowed admission. Its collections are displayed, and labeled, with the sole object of interesting and educating the public which it invites and welcomes to its halls. In thus popularizing its installations it does not in the least sacrifice the scientific value or aim of a museum of its sphere. It cloaks the nomenclature and theoretic classification of science, so far as the attention of the public is drawn, while, at the same time, these elements are present to the satisfaction of the naturalist and the student.

I once saw a couple of men standing before a fine pair of specimens in the mammalogic section of a public museum. The specimens were labeled in large type: *ODOCOILUS AMERICANUS BOREALIS*, Michigan, U. S. A. That was all. The men spelled out the words as well as they could; then one ejaculated: "I don't know what in h—l that means, but any fool knows that them are deer." To those



men the value of the museum shrank decidedly and in their minds the standing of the scientific man who labeled the deer fell considerably below the standard he doubtless hoped to maintain.

The installer of a collection in a natural history museum for the public should show his knowledge of nature, and of psychological effects, when he places objects before the outsider, for the outsider is the man who really knows things as they are, not as scientific classification would they should be.

The first item presenting itself in the practical details of installing a collection for public view is the case. Ours are of natural finish red birch, with just sufficient wood in evidence to safely support the plate glass of the face, and only sufficient depth to allow of one plane of installation. Interiorly they are painted flat black, as the only color that should attract the eye is that of the specimens themselves and that should in no case be interfered with. I fully realize that there is no background color more restful and pleasing than a gray, nor one that will better preserve and enhance the color values of specimens, yet permanency must be the main desideratum in installation, and for that reason gray, white, or any color, must needs be eliminated. No color can be patched without disfiguring the surface, nor can any colored pigment be matched after light and time have acted upon surfaces previously painted with it. Despite the disadvantages of black, and they are many, it is the only pigment that will not fade; that can be successfully and unobtrusively patched in reinstallation; that can be readily and perfectly matched in new installations; that will hide all imperfections in the woodwork and the extraneous appliances necessary in supporting specimens; that will give a background against which the outlines and colors of all objects will be fully defined; that will clearly demark each specimen from its neighbor; that will prove permanent and fresh as long as the case remains installed. Not only does flat black answer all these equations but it has the advantage of concealing the mounts, plaques, label holders, brackets, supports, screws, nails, and other accessories that may be painted with it, while even charcoals stand out in bold relief against it.

Our cases are mostly of the wall type, eight feet high, twelve feet long, and of such depth as may be necessary to accommodate the largest object of each special installation. Nine-tenths of those thus far installed are nine and a half inches deep in the glazed portion. The lower section of a case being ill adapted to the display of material

we have converted it into a locker space leaving the display area five feet eight inches by twelve feet. This is divided into two units by single-pane sashes. Of the lockers, two of which are beneath each unit, the first contains a series of duplicates of the material installed above and constitutes an organized and protected study series to which specially interested persons are allowed access. The other affords a contiguous depository of allied and new material as it is received. Thus everything pertaining to the material in the cases—notes, duplicate labels, original labels, and the like, is in direct association and readily available.

With its dark background and light-colored sash frame each case is considered as a picture to be made as rich in color and form and as attractive in composition as the art of the installer may be capable of producing. It is this picture that is intended to first attract the visitor—first to cause him to halt in his “museum stride,” and to incite in him a desire to examine details. In this presentation the labels are fashioned so that they blend with the whole, yet when attention is once called to the specimens themselves the labels stand out clear and attractive. I realize that in this form of installation I am at direct variance with the axiom of a great museum authority who claimed that “a proper installation should consist of a collection of carefully prepared labels accompanied by well selected specimens.” Labels do not in themselves attract. Indeed they almost invariably repel. They should not, therefore, be considered first in importance in a museum for the public, but rather as essential accessories. Ours are printed in silver upon card of the same flat black as the case interior and specimen mount. They never obtrude, yet they cannot be overlooked.

Referring again to plant material in bottles pickled in a preservative liquid, discolored, dead, ghastly, of no general resemblance to nature and of little interest to the laity; such material may be likened to a collection of hides hung upon pegs in alleged representation of animals. Such material is entirely inadequate; it must be replaced by something worth while, something that is representative of life. To accomplish this actual reproduction is necessary—reproductions that will interest the observer and reveal the intrinsic beauty and instructive value of the plant itself. Such reproductions must be natural in size and texture and as perfect in character and detail as it is possible for the highest skill to produce. Any reproduction that falls short of this fails as ignominiously as the pickles fail. They

should be made of any, or all, materials best suited to represent the object. Glass flowers belong in a museum of glassware, yet reproduction can not be successful without the utilization of glass; wax flowers to an exhibition of wax work, yet the employment of wax is essential in all reproductions; coloring must be done without the least indication of the brush. Nature does not paint her flowers; whole fruits must not be displayed separate from their leaves and attachment to the branch. A museum is not a horticultural show. In addition to the natural-size reproduction enlarged models of essential characters must be added in order to exemplify the existing differences that form the basis of classification. It is claimed by many museum men that such reproductions are false, that fabrications should have no place in museum collections, yet they consider taxidermy essential and are glad to secure casts when they are unable to compass originals.

In the botanical department of the Field Museum installation is being carried on to the end that the complete series of cases shall represent, in successive order, each great family of plants, their structural characters, and their natural association with each other. The first objects installed in a given case are: a natural-sized reproduction of a typical plant of the family to be installed therein (choosing a plant of known utilization where possible); a model of an enlarged flower, detailing its organs; and a section of a ripe fruit so cut that it will illustrate the developed ovary. Following these are reproductions of variant perishable fruits or natural carpologic examples; then as many useful products, yielded by the family, as can be secured.

From this installation the school boy or girl, or the general visitor soon realizes that there is an interrelationship in plants, and even a consanguinity in plant products. They see with satisfaction a valid reason why, for instance, sassafras and cinnamon are so much alike in odor and analogous in taste, and become not unwilling to associate with them both cassia-buds and camphor.

Pleased with the new horizon that opens before them they examine other products in the case with an actual desire for further satisfying discoveries. They are now willing to read labels—to accept them with interest—and the labor that the museum curator has expended upon his installations has accomplished its object.

---

*Treasurer Wilson.*—"I would like to ask Dr. Millspaugh if there is any other museum in existence attempting to carry out such a

work as this. I have never known of its being done so fully, so thoroughly, and so beautifully elsewhere."

*Dr. Millspaugh.*—"The only museum I know of, Dr. Wilson, that is carrying this out to any extent at all is the British Museum in South Kensington, in the fungi. In Dresden they are trying to preserve original plants, but are failing very miserably indeed."

*Prof. Edward S. Morse (Peabody Museum, Salem).*—"Dr. Millspaugh's paper will set us all thinking in regard to the color of our cases. The radical departure of painting the cases black certainly surprises me, yet it was presented so clearly that in well-lighted halls it may be the very best thing. Many of our museums are not well lighted, and obviously in a hall with few windows it would be impossible to have black cases. Too much light would be absorbed. On the other hand we often paint our tablets black, and, as the speaker has said, if you get a clear definition, even a minute particle will show against a dead black surface, and you have the advantage of a color that will not fade. White paint becomes yellow and shows cracks. Our fabrics fade so that we have had to discard entirely cloth that was used only four or five years; and the ivory colors for charts all fade white in a very few years."

*President Lucas.*—"I am sure all the museum men present have heard Dr. Millspaugh's paper with great joy. It is the kind for which we have all been waiting. As far as I know it is the first attempt to install a botanical collection which shall be really valuable alike to the public and to the scientific man; it marks a distinct departure in the installation of botanical collections. In regard to the backgrounds, I still hold to my belief that we must be governed by circumstances."

*Professor Morse.*—"It is obvious that Dr. Millspaugh has a fine flood of light. The way those cases were illuminated he must have had galleries without roofs."

*Dr. Millspaugh.*—"I might mention in regard to this that all the lower section of the Field Museum of Natural History is one of the dingiest places you can imagine in a museum building. The department of geology, under Dr. Farrington, has black cases throughout. The same is true of the department of zoology, to some extent, and of the department of anthropology. In some of those halls, especially on a winter day when there is snow on the roof, it is so dark you can hardly find your way about, yet the cases are as evident as any other portion."

*Professor Morse.*—"Then your physical laws must be different."

*Dr. Millspaugh.*—"Our physical laws in Chicago are entirely different from those of any other place in the world." (*Laughter.*)

*President Lucas.*—"I may say that the picture now on the screen represents the new species of *Boötherium* discovered by Mr. Sargent and described by Mr. Gidley of the National Museum. We could, I think, profitably discuss Dr. Millspaugh's and Dr. Hollick's papers for an hour or two. I am sorry that we have not the time. They are both admirable."

The meeting was then adjourned until the following morning.

## SESSION OF WEDNESDAY, JUNE 1

### *Morning*

The Association reassembled at the rooms of the Buffalo Historical Society in Delaware Park with President Lucas in the chair.

Treasurer W. P. Wilson read his annual report, which was referred to the Auditing Committee, consisting of Messrs. Farrington, Baker and Ward, to report on the following morning.

The Chair then asked for a ruling of the Association regarding members in arrears for dues and it was voted that the Treasurer be directed to prepare a circular stating that members two years in arrears will be dropped from the rolls and to send to the Secretary a list of such members. It was further provided that at the time of publication of the *Proceedings* the Secretary be directed to withhold copies from all members in arrears and to send them instead a notification that the *Proceedings* are held for the payment of dues.

The amendments to the Constitution proposed on the previous day were then considered. The amendment providing for the increase of the dues of Active Members from two dollars to three dollars was then adopted. The paragraph relating to Associate Members was then amended to read: "Persons contributing one dollar per annum may become Associate Members." Dr. J. E. Talmage was then appointed a committee of one to formulate an amendment to the Constitution defining the manner in which amendments may be made. In discussing these amendments and the need of larger funds for the Association it was pointed out that the Constitution fixes a minimum fee only of ten dollars for Sustaining Members and it was the sense of the meeting that this class of members be requested to contribute more



largely to the treasury for the coming year in order to assist in defraying the unusual expenses incident to the preparation of the Directory of Museums.

The Association then proceeded to the election of officers for the ensuing year with the following result:

*President:*

Frederick J. V. Skiff, Director, Field Museum of Natural History, Chicago, Illinois.

*Vice-President:*

Edward S. Morse, Director, Peabody Museum, Salem, Mass.

*Second Vice-President:*

Edward Robinson, Assistant Director, Metropolitan Museum of Art, New York City.

*Secretary:*

Paul M. Rea, Director, Charleston Museum, Charleston, S.C.

*Treasurer:*

W. P. Wilson, Director, Philadelphia Museums, Philadelphia, Pennsylvania.

*Councilors, 1910-1913:*

Frederic A. Lucas, Curator-in-Chief, Museums of The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

Henry R. Howland, Superintendent, Buffalo Society of Natural Sciences, Buffalo, N. Y.

The first paper of the morning was then read by Dr. A. R. Crook, curator, Illinois State Museum of Natural History, Springfield, Ill.

## THE TRAINING OF MUSEUM CURATORS

Before the writer was aware that this subject was to be taken up at this meeting he began to collect materials on the equipment and work of museum men. He was led to do so for two reasons: first, because in conversation with successful professional men, governors of states, presidents of universities, members of scientific faculties, distinguished geologists, and even trustees of museums, he observed a lack of just appreciation of the preparation requisite for the highest type of museum man and of the nature of the work which the director of a museum should accomplish; second, because of the thought that the



director of a museum while pursuing one object might close his eyes to great prizes, might be so engrossed in trifles or details as to lose sight of the larger view, might become one-sided and miss great opportunities of usefulness. Hence it seemed probable that suggestions from a number of colleagues would be helpful to the museum man as well as to trustees and the public at large and that the consideration of this question would help the museum both from the outside and from the inside.

Realizing that in a multitude of counselors there is often wisdom, requests were sent to a dozen of the leading museum men of the country for a list of questions which might aid in judging a man's fitness for the position of director or curator of a museum. It may be said parenthetically that whether the official is called director, curator or by some other title is immaterial. Near the close of a three-year period of study in German universities where the writer had been assiduously assimilating the German language along with geological ideas he sent in one mail letters to the "Keeper of Geology" and to the "Keeper of Paleontology" in the British Museum and a letter to a geological curator at one of our eastern institutions whom he inadvertently addressed as the "Keeper of Geology." In due time a savage reply from the American came stating that the only "keeper" that he knew was a keeper of a penitentiary or of an insane asylum and being neither he would be obliged if his correct title were employed! Whether we call the man at the head of the museum director, curator, or keeper is immaterial. The question is what kind of training he should have and what kind of a man he should be.

The museum over which he is to preside is the ordinary natural history museum of which there are some hundreds in the United States and which reach out in various directions touching possibly on the borders of many departments of science and life.

If the public generally and trustees in particular were better acquainted with the training requisite and the work to be accomplished by a museum curator, there would be better methods of appointment and better museums. Every private museum would select its employees after examination and every municipal and state museum would be under civil service. And if young men with ambitions to take up life work of this character knew what attainments were desirable they would be better prepared. The kind of training necessary may be inferred from the questions which would reasonably be asked of a candidate for such a position.

Münsterberg proposes to determine the fitness of students for various professions by a series of psychological experiments and thus aid many a youth in avoiding the work in which he is almost sure to fail and in choosing that for which he has the physical and mental capacity. The psychological experiments which might be devised to show whether or not a candidate would make a good curator would necessarily be extremely varied since in no profession is a greater variety of accomplishments and capabilities required. As far as the writer is aware they have not been devised. However, a good idea of the training which a candidate should have may be obtained from questions prepared by men whose experience has given them a broad outlook and a profound knowledge of the necessities of the situation.

The questions are roughly arranged in three groups: the first dealing with the general educational history of the candidate; the second with his specific knowledge of the museum situation; and third, his ideas concerning the more technical portion of the profession.

The majority of colleges have entrance requirements such that few members of their own faculties could answer the questions which they expect incoming students to be able to answer! Upon looking over our list of questions we may wonder how many of the profession could measure up well if put to the test!

But the questions are fair. They cover the ground. Every present and prospective museum man should be able to deal with them with credit. I have entitled the series a typical list of questions useful in determining a candidate's fitness for the position of curator of a museum of natural history. They are as follows:

1. In what schools have you studied?
2. What degrees have you received?
3. To what scientific organizations do you belong?
4. State the positions which you have held, the duties involved, and your length of service.
5. What languages other than English do you know?
6. In what countries have you traveled?
7. What have you been interested in collecting?
8. What experience have you had in museum work and in what line are you most interested?
9. Have you skill in mechanical work, photography, taxidermy, or field work?
10. In how many of the following have you a working knowledge and which is your specialty—geology, mineralogy, paleontology, archeology, ethnology, zoology, botany?

11. Give full list of your scientific publications.
12. What skill do you think you possess as a solicitor for materials and money?
13. Along what lines should a museum be developed; in other words, what is the purpose of a museum?
14. Name ten of the leading natural history museums of the world and state the essential character of each.
15. Give titles of the scientific publications issued by three leading museums in America and by three foreign museums.
16. What has been the trend of museum development in America during the past decade?
17. Distinguish between (a) the educational and (b) the scientific work of a museum.
18. Describe the conditions under which a museum should be a conservator of materials and those under which it should be an aggressive agent in educational work.
19. Has it any other function?
20. Define the scope of (a) a university natural history museum; (b) a municipal natural history museum; (c) a state natural history museum; (d) a national natural history museum.
21. State briefly your views as to the relations which a municipal or state museum should maintain with schools, colleges and special students.
22. Explain in detail the age, intelligence and occupation of the people to whom a museum should appeal and how it can best benefit them.
23. To what extent should the growth of a museum depend upon donations and to what extent upon vigorous effort to reach certain ideals?
24. What do you consider the principal requirements for a satisfactory museum building? (Consider at least five points.)
25. Explain the principles of proper labeling, giving an outline of a suitable label for *Amphelis cedrorum*, Cedar Waxwing; for an army field writing desk used by General Grant during the civil war; for a fossil plant; for a mineral.
26. Discuss items to be considered in case construction.
27. Discuss items to be considered in the color scheme of rooms and furnishings.
28. In what order would you arrange the main groups (such as minerals, rocks, reptiles, etc.) starting with those which would be first seen upon entering a museum?

29. Would you arrange a collection of fossils stratigraphically or zoologically?
30. Where would you store a study series collection?
31. Should a museum receive gifts subject to restrictions imposed by the donor?
32. What is the best method of cataloging a museum?
33. Should a museum issue publications of its own, and if so what should be their character?
34. Should a museum maintain a library, and if so what should be its extent and character?
- 35-50. Prepare a thesis of not less than 3000 words summarizing your views as to the proper organization of a natural history museum as regards (a) personnel (b) care of collections (c) exhibits, emphasizing especially that department which is covered by your specialty.

After the candidate has safely negotiated the above questions he is supposed to be able to pass muster in the following regard. He should have good health, ability to handle a horse and canoe, and be inured to the hardships of camp life and the work of exploration. He should be an expert proof reader, a good letter writer, something of a cataloger, and should have artistic taste and sound judgment. In discussing this question one of the correspondents says:

“Above all he should be a person of good education—the more the better—genial personality and good address, and of course of unquestioned character. It is also desirable that he be of good family connections, in other words he should be able to meet in a proper way, to interest and to please persons of wealth and importance who may visit the museum or be inclined to lend their aid to its development. He must have marked executive ability, a certain amount of diplomacy, and the power of making himself agreeable to the officers and assistants in the institution, so that harmony shall be maintained in the museum corps. I consider this requirement as very important.”

Taken all in all the requirements are very exacting and the question is where such training may be secured. No school can give it, no one occupation and no one locality. It is such training as comes from a life of the widest opportunity made up of the combined contributions of home and school, of books and nature, of travel and experience.

It is without doubt exemplified in the attainments, character and work of many of the men who are now serving various museums in the country.

---

In the discussion following Dr. Crook's paper Professor Morse of the Peabody Museum, Salem, pointed out that much depends upon the size of the museum and the character of the position occupied. Dr. Crook explained that his intention was to indicate the preparation which might be expected of the young man going into museum work.

Other speakers emphasized various sides of the curator's work and the general opinion seemed to be that, while varied training and broad experience are essential in the administration of a museum, a successful curator must have pronounced natural gifts for this kind of work and that special tests as would be provided by examinations are of less value than experience and personality. Dr. Crook's paper was considered a very full and satisfactory statement of the ideal qualifications for museum work. The discussion was closed by the Chair as follows:

*President Lucas.*—"I believe the curator is born and not made. I do not believe you can train a man to be a curator. He is the result of the combination of natural ability and circumstances. He must be a man, as some one has said, who must know something of everything and everything of something. Such a man is difficult to find. It is not so much what a man knows, where he has been graduated, as what he can do; that is, what he can do to make the knowledge of others available and understandable by the public and his conferees."

The Chair then introduced Hon. Henry W. Hill, president of the Buffalo Historical Society, who extended a cordial welcome to the Association.

Mr. Frank H. Severance, secretary of the Buffalo Historical Society, then read the following paper:

### HISTORICAL MUSEUMS

While I make no pretense to being a trained museum worker and really have little right to share in your proceedings, I am very glad of this opportunity to welcome you here in behalf of our institution. Your program has assigned to me the subject of Historical Museums and their Relation to the Museum Association. By way of preface to what little I may offer on that subject, let me tell you briefly something about the Buffalo Historical Society.



We are really an old institution, the Society having been incorporated in 1862. For many years its career was typically that of the usual historical society. It enlisted the interest of a few men and women in the community, but it had slender resources and for long periods scarcely attracted the attention of the general public. Throughout its earlier years, it occupied various leased quarters in downtown buildings. Its library and its museum gradually grew by gift. As time passed, there also accumulated a fund, principally from the bequests of generous friends who remembered it in their wills. So it happened that the Society had a considerable building fund and was debating the matter of procuring a suitable site and erecting a home for itself, when the Pan American exposition came along and changed all our plans. We owe it largely to Senator Hill, who is with us this morning, and to some of his associates who have passed away, that an arrangement was finally made with the State of New York by which a portion of the State's appropriation for the Pan American exposition should be set aside and combined with funds to be contributed by the Historical Society and the City of Buffalo, the joint fund from the three sources to be used in the erection of a permanent building. This in brief is what was done. This building where we are gathered was built in this way, its cost to date considerably exceeding \$200,000. The State used it as headquarters for its commission during the exposition, and at its close a formal transfer was made to this Society, which made some changes necessary to adapt it to its needs, and has since occupied it. All of this by way of explaining how we happen to be so well housed. It is proper to add that the City of Buffalo contributes to the maintenance of the property. Our institution is fortunate in its relations to the community in which it carries on such work as falls within its scope. The Historical Building has proved from the start a popular resort, due largely to the beauty of the architecture and the pleasantness of the surroundings.

Now, I have said that our museum in its beginning was the result of miscellaneous giving by well-meaning friends. From the beginning it has grown only by gift; the Society has never had funds for its systematic development by purchase of important collections. Our principal energies have been and now are put forth in other work—in building up a historical library, in collecting manuscripts, in lecture work with the schools, the public, and our members, and especially in carrying on the work of editing and publishing historical



volumes. Those of you who have looked about our rooms or glanced over the cases need not be told that the collection lacks many of the essentials of a well-systematized museum. In that respect I think we are neither worse nor better than the average historical museum.

Speaking from a knowledge of several of the historical institutions in this state, I feel we are not wrong in saying that, with the exception of two or three, notably in New York, there is not in all New York State a historical museum which approaches the ideal as it should exist for any neighborhood. My conception of the ideal historical museum is that it should present by logically arranged collections such relics of the different periods in the history of that region as may be preserved. We would, of course, always begin with the utensils and weapons, and other reminders, of the Indians; then should follow articles typical of the pioneer period and of each succeeding period, illustrating the condition in that particular locality. The range of articles may be gradually extended within the historical field; portraits and maps, and all printed records, are essential to such collections. Many localities would have collections peculiar to their own region, according as that region has developed special industries or shared in some peculiar way in the general history of the state or nation.

It is of course much easier to specify what an ideal historical collection should be than to find it. The historical societies themselves present a great variety in development, resources, and object. A few of them are financially well off, owning their own buildings and engaging in various works usually in the way of publishing historical records or of carrying on courses of lectures, either for their members or in connection with the schools. Oftener, however, the historical societies, so far as I know them in this state, are not able to do such work and are content to do much less. Some of them have very meager possessions, often in a community quite indifferent to their aims and desires. Often the historical organization in a county is little more than an annual farmers' picnic, which brings together the older people, fond of reminiscences and of keeping alive the memory of an elder generation. More than one historical society in Western New York is known only through such occasional gatherings, the reports of which are published in the local paper. Of a different character, and within its field and opportunity fulfilling, I think in a most happy way, the aims of a historical organization, is such an institution as the Livingston County Historical Society. With no considerable

funds, yet under the guidance of a judicious and enthusiastic spirit, that society brought about the erection of a log cabin which stands in the village green or park in Geneseo, and is the depository of a most interesting collection of the pioneer relics and relevant articles, all bearing more or less on the early history of that community. Such a building and such a collection are very real teachers of history and serve better the purpose for which they are maintained than do the resources of many a large and better endowed institution. These instances sufficiently illustrate the varying character of historical societies and of their museums.

To a scientifically trained mind, most museums of historical societies must appear, I think, hopelessly heterogeneous. The most incongruous collections are preserved because, perhaps, they are the gift of some friend who wishes his cherished relics to be kept together, marked with his name. I do not think, however, that the situation is quite so bad as it appears. Granted trained curators or even a fair amount of time by attendants of ordinary intelligence, and the worst of our historical collections could readily be systematized and made to teach. Here, I think, is the keynote, the clue, for improvement. Those who are responsible for historical museums should be able to recognize the difference between relics and rubbish. There must be something about a relic which teaches. It must recall in some degree the conditions of the vanished period to which it belongs. If it does not do this, out with it! With this standard of elimination and knowledge enough of the history of our country to enable the custodian to bring together articles of the same period, there is no difficulty in putting even the most meager collection on a historical and scientific basis of classification. Of course, where the articles have come only by gift, and that means by chance, there can be no uniform representation of the different periods which the museum should cover, but even a scientific collection is not the less scientific because there are great gaps in it, if what *is* shown is properly classified. Such I think may be the case with a museum which undertakes to recall by relics the history of a town or a larger community.

These ideas, then, of elimination of the worthless, and the systematizing of the valuable, are the ideas which historical museums need to imbibe and to carry out. They would get inspiration in this work from association with this organization. If you have in view the affiliation of our historical societies, I suggest the appointment of a committee which shall report at your next meeting on the existing

societies which maintain museums of sufficient resources to enable them to share in the work of this association. When this preliminary survey of the historical museum field has been made, the next natural step will be to invite the coöperation of these institutions. That they all can profit from such association in your work is I think beyond question. I know of no institution which has more to gain from such coöperation than our own here in Buffalo, which has the honor and pleasure of welcoming you to-day.

---

*Secretary Rea.*—"I am responsible for asking Mr. Severance to open this discussion, and for this I feel that I am open to congratulations. As a matter of fact the discussion was forced upon me by the investigations which I have been conducting in the effort to compile material for our directory of museums. I have been waiting with a great deal of interest to see what Mr. Severance's ideas would be, as to whether they would conform to or differ from the ideas which I had formed as a result of my experience, and I am interested to find that they agree almost completely with the conclusions which I had reached. I have been impressed, first, with the fact that there is a very large number of historical societies in this country; that in many states there is one in every county; and that this undoubtedly means that there is in the community a very general appreciation of the desirability of a certain amount of historical work. Mr. Severance has very well pointed out that many of these societies have no permanent home. Comparing them with other institutions of various kinds in the country, they are among the most difficult to reach by correspondence that I have ever known. More letters come back from postmasters when directed to historical organizations than to any other class of institutions that we have corresponded with. When letters presumably reach some one, having failed to come back, a very large proportion elicit no reply, showing that there is not a sufficient organization to secure the delivery of a letter to the right person, if there be a person who is in a position to answer it. Furthermore, if one succeeds in getting the information, it shows that while a considerable number of these societies maintain some collections, they are, as Mr. Severance has said, haphazard, the result of gifts which have not been systematic, and there are seldom funds for their proper development. This presents to us the question whether there is work for this Association in connection with these museums. Does

the fact that little money is available for their development mean that there is not a field for our coöperation? I scarcely think that can be the case, because the number of societies is so great as to indicate a general interest in history. Is it possible that historical organizations have not fully appreciated their possibilities and have therefore not directed a sufficient amount of attention to their development? If this happens to be the case, can we assist them in so practical a way as to secure their coöperation? If there is a field for historical museums, what is that field? Here I find that the principal expression in the directory returns is the one word 'relic' as representing history. Now, I am not a competent person to speak on historical collections or historical work, but I am very curious to know what the significance of a relic is. As a scientific man interested in natural science, it appears to me at first thought that there are two points of view with regard to historical objects. One is that these objects may preserve a record or an indication of past conditions which are being rapidly taken beyond the reach of easy investigation. In other words, every object which will tell us something with regard to the life and work of past ages seems to be of historical importance. In my natural history museum I have certain objects which have crept in because there was no other place to put them. They include a very remarkable specimen—a specimen with a very remarkable label, perhaps I better say—'Part of a tree under which Columbus said mass when he discovered America.' Another specimen which I have is a scythe blade used as a sword by Marion's soldiers in the Revolution. To my mind as a scientist this tree under which Columbus said mass is of little value except as showing the distribution of a certain species of tree, or as indicating the religious practice of Columbus. The use of a scythe blade as a sword, however, is a very interesting indication of the conditions under which Marion operated in the Revolution, and as such it seems to me to have a very distinct historical significance. The other idea which has impressed itself on me is that there is a possible value of the relic. If some one gave me a copy of the *Origin of Species* which had been used by Charles Darwin, I should treasure it as a book of interest in my library; yet if the copy were not annotated, I do not know that the handwriting of Charles Darwin would increase the value of the book, except by way of sentiment, and I am perfectly prepared to recognize the value of objects which may serve as points of focus for sentiment and historical interest. But there, it seems to me, we

must draw a very careful line between what I might call the trivial relic and the respectable relic. Some institution told me that it had—I hope I am not quoting it a little too strong, but it was something like—‘a hobnail from the shoe of the grandfather of Abraham Lincoln.’ I do not know whether there was enough of it to show anything about the kind of shoes that were worn in those days, and I do not believe there is any sentiment worthy of the name to be attached to a hobnail upon the shoe of the grandfather of Abraham Lincoln, and I would like to know from any historical workers present what they consider the dividing line between these trivial relics and objects which are really of historical significance. In small collections the relic predominates and serves no very practical purpose. In extensive collections a certain number of these small relics may well contribute to the general effect of an exhibit. There is a museum at Nantucket which is devoted to the history of that most interesting island. It has accumulated a very large amount of material relating to the entire period of Nantucket history. The collection is arranged, generally speaking, in an admirable manner and I consider it one of the most interesting historical museums I have seen.

“I think the presence of relics in such large numbers in historical museums is due to the chance method by which they have been acquired, as Mr. Severance has indicated. It was said a moment ago that one of the functions of a museum director was to keep things out of museums. In scientific museums there is a certain amount of scope for the exercise of that ability. In art museums I suppose that there is much more. I apprehend, however, that the authorities of a historical institution have a still more difficult task, in that they will offend some of the best old families of the town if they decline to receive these venerated relics, and I wonder if a general consensus of opinion derived from coöperation with an association of this sort might serve to stimulate the development of a more critical feeling with regard to the acquisition of such material. These are just some of the ideas that have come to me in gathering together material for this directory and in the effort to consider how our Association may extend an influence to improve historical museums and make itself more completely an exponent of American museums of all classes. I hope there will be a free discussion of these points that Mr. Severance has brought out.”

*Dr. Charles F. Millsbaugh (Field Museum of Natural History).—*  
“I could not consider myself, probably, worthy of speaking upon this



subject of historical museums, but it has just occurred to me that something that was said last night might possibly have a bearing here. The label was spoken of as the first and primary object in a museum installation. Now, I can see in this hobnail a splendid illustration of many things that come into the historical museum. Combined with a label that would place the great-grandfather of Lincoln before the people, give some idea of what he did for history, I can conceive that a hobnail could have an excellent office in the historical museum. Many of these objects have crept into the museums. If we could display them in such a way as to point to historic events, these objects should be of value to a historical museum. In examining such museums I have found that the labeling was more inefficient than the objects themselves."

*Prof. Edward S. Morse (Peabody Museum, Salem).*—"In the historical museum at Salem it is very difficult to draw a hard and fast line as to what objects are of interest and what are not. I remember in the collection there a pair of little mittens. The label reads: 'Worn by Dorothy Mills at the funeral of her grandfather in 1802. She not only wore the mittens but a black dress, and when only three years old she walked to the grave of her grandfather.'

"The picture that brings up of a little infant three years old with a black dress and black mittens traveling to a grave and back again is of interest; and so this hobnail simply shows that Abraham Lincoln had a grandfather. We were not quite sure he went back so far as that. (*Laughter.*) I do not know where to draw the line. Boys collect all sorts of things. I had in my relic cabinet a piece of George Washington's dress (of course it never was worn by George Washington); also a spike from a shipwreck. But that rusty old spike brought up the sea and the terrors of navigation more than a whole novel. So I take these things, although we may laugh at the audacity of it and think them of little intrinsic value or interest in history. How to arrange the material I do not know. We have definite classifications in zoology—the vertebrates and mollusks and articulates and so on—but when we come to collections of boot-jacks, coffee mills, and forty thousand other things, I do not know how we are going to classify them."

*Mr. Charles Louis Pollard (Staten Island Association of Arts and Sciences).*—"It seems to me that Mr. Rea has made a very careful discrimination between relics which may be considered historically important and those which we relegate to the limbo of the curious.



A gentleman who had visited some of the southern battlefields of the Civil War brought back a collection of miscellaneous trophies which he came and offered to me, the fragment of a shell, a battered pewter coffee pot, and various other objects, and on top of them placed an envelope with a great deal of reverence. I asked, 'What is this?' He said, 'That is a little of the iron rust from the monument on the battlefield. I couldn't bring the monument so I brought that.'" (*Laughter.*)

*Mr. Louis Earle Rowe (Museum of Fine Arts, Boston).*—"If I might offer one illustration in addition to what have been mentioned, I would like to refer to one which is to be found in the Rhode Island Historical Society's collection, where they have a fragment of an apple tree root which at some unknown period entered the grave of Roger Williams. There is a very extensive label on this object which calls attention to Roger Williams' grave, which of course is revered, and goes on to say that the apple tree grew near the grave; that the root grew down into the grave and starting at about the neck extended down the length of the body, and when they opened the grave this root was found following the lines of the body, even to the bending of the foot. They have other things relating to Roger Williams which are much more valuable. I merely refer to that as a sample of what sometimes gets into our collections and as bearing on what Mr. Rea has said."

*Dr. John M. Clarke (New York State Museum).*—"You cannot do very much by a general discussion of how historical materials are to be classified. They may be classified as Professor Morse would classify his vertebrates and invertebrates, or they may be classified historically by their proper periods; but aside from that, there are a vast number of small local societies—in New York, as Mr. Severance has said, we have thirty or forty—who care nothing about the existence of this organization, who probably for the most part know nothing about it, who certainly will not pay two dollars or three dollars a year for participation remotely in these meetings; and yet I am very earnest in my belief that they ought to be brought in some way into connection with the many phases of activity which this organization is bound to attempt as time runs on. Here is a serious proposition, and it is something that cannot be determined on an occasion like this. It is all right to affiliate with large historical museums like the Historical Society of New York City, the Long Island Historical Society, the Buffalo Historical Society, and the

New York State Historical Society; but I am speaking now of the local societies in the smaller communities, and of our coöperation in vital things which they have taken up in the past and which represent a great deal of value as far as they are concerned with the accumulation of local relics. The oriental tourist who has come back and presented these societies with collections has not added very greatly to their interest. Now, I propose, Mr. President, that we take this occasion to consider the wisdom of appointing a committee who shall take under advisement the problem of dealing with these local historical societies; not that they shall be called upon for an immediate or early report, for there are difficulties here that cannot be overcome if it is really the desire of this organization to bring these local societies within the sphere of its influence and to get from them some concern in our activities. I put this, then, in the form of a motion that the President be authorized to appoint a committee of three to consider the possibility of mutually advantageous coöperation between the Association of Museums and the many local and other historical societies in this country."

*President Lucas.*—"The motion is that a committee be appointed to take such action as may be necessary to formulate a plan for co-operation with local historical societies." (*Carried.*)

*Mr. Herbert E. Sargent (Kent Scientific Museum, Grand Rapids).*—"One phase of this question which has interested me a great deal because I am constantly meeting it is the personal element. A great many of the people we wish to reach, whom we wish to raise to a higher level, are interested in the sentimental part of this question, and if we can cater a little to their interest without interfering with our higher work by showing to them in an inconspicuous way the relic, as we call it, we can enlist their interest and lead them on to something which is higher. I find that that is a very important thing in the smaller institutions. If our museums are to cater entirely to the interest of those who have developed tastes along this line, that is one work. If they are to cater to others and cultivate an interest which will elevate the public, that is another. I believe personally they can do both."

*Miss Delia Isabel Griffin (Fairbanks Museum of Natural Science, St. Johnsbury, Vt.).*—"The museum at St. Johnsbury has made an effort to systematize its historical collection. Being a natural history museum we have no right to a historical collection, yet since we have a field rather rich in a colonial past we felt we could not pass the subject

by. Having an unoccupied room, we simply put a few cases into it and began asking our friends to bring in the historical objects which they had. As a result we have accumulated, in the last two years, very good examples of the old colonial china of the region, about four hundred specimens, entirely in a loan collection. Of much more value, we have an exhibit of methods of lighting in colonial days, lanterns, old pewter lamps, and all kinds of candle-sticks. There is another exhibit showing all the implements used in making wool garments, another showing everything used in the making of cotton and linen, particularly linen garments from the flax, and another which shows the articles used in the preparation of foods, and old Dutch ovens, fireplace ovens, etc. So we have formed an exhibit that is extremely interesting and have had no difficulty in getting all of it without the expenditure of a cent of money."

*Mrs. J. K. Freeman (Buffalo).*—"I think in every community there are a great many things of value and interest that people have and are glad to give to historical museums if they know the exact lines along which the museums wish to form their collections and the kind of things they would like. A great many people really do not know what they have of value until their attention is called to it. I think this is so in this community and in every community."

The committee appointed at an earlier session to prepare resolutions regarding the preservation of objects of historical and archeological interest then presented a report which gave rise to considerable discussion which was not concluded at this session.

The Association then adjourned for luncheon at the Park Club.

## SESSION OF WEDNESDAY, JUNE 1

### *Afternoon*

The meeting was called to order by President Lucas, in the lecture room of the Albright Art Gallery, Delaware Park, at 3.30 p.m.

*President Lucas.*—"It is scarcely necessary to say after Miss Sage's cordial greeting to each and every member, that we are to make ourselves at home here, but I am commissioned on the part of Miss Sage to say that we are most welcome; that the Museum with all it contains is ours, but we are not to take away any specimens." (*Laughter.*)

Mr. Louis Earle Rowe, docent, Museum of Fine Arts, Boston, then presented the following paper:

### A GALLERY LEAFLET FOR ART MUSEUMS

It is not the purpose of this paper to revive the much discussed subject of labeling, which is of necessity always demanding notice, but merely to call attention to a form of the well-known leaflet which has been devised to answer the requirements of one of the largest art collections in America. It is not to be expected that this gallery leaflet will meet with immediate approval, but an explanation of its form is offered in the hope that it may arouse discussion and show the possibilities latent in its general idea.

The problem in the case of the art museum is slightly different from that of the natural history museum. Its prime interest is to show the qualities of its works of art as such, and secondly to call attention to the light which such monuments throw upon the life and spirit of the times. We will grant that it is necessary to know what the object represents, its date, and the name of its creator. But is it necessary as well to place on a label, "Landscape" or "Head of a Man" when a visitor can see that for himself, provided always that the location, or the man's name is not known to the museum officials. Is it not rather necessary to explain why such an object reflects the spirit of the age in which it was made? This knowledge surely we cannot expect in the ordinary visitor to an art museum. And finally, can all of this latter information be printed on a label which will be legible and yet in scale with the object on which it is placed? I am not so sure that we would not admit that labels are in a sense disturbing extraneous features if we are considering objects as works of art solely. The difficulty lies, then, in devising some form of descriptive matter which will not draw attention away from the object, which can be legible at the proper distance for seeing the object, and which will explain the value of the work in itself, and its relation to the other objects in the department. One answer is found in the form of gallery leaflet which will be described.

The gallery leaflet as proposed in the Boston Museum has the following features: The first page has the name of the department and of the room; the second page has a representation of the room, either in ground plan or photograph showing the objects in their relative positions. The next few pages contain descriptive matter under the

various numbers. This arrangement gives more explanation than a label can possibly give, unless the label becomes a positive disturbing feature on the pedestal or frame. It is possible also to add the size of the object, the name of the donor, the material, and some notice of the treatment. It is obvious that some objects admit of fuller explanation than others so that the length of the description varies with the importance of the object. The next page following those with the descriptive matter directs the visitor to the department office, informs him about the possibility of seeing and using the supplementary collections, and offers the aid of the person in charge. It also directs the visitor to the library where more general descriptive matter may be obtained, and gives the location of maps, photographs, or stereoscopic views which may be seen and used. (Concerning the stereoscopic views, let me say that the Egyptian department of the Boston Museum has placed in its office as apparatus a full set of Underwood and Underwood's views, with the book and maps compiled by Professor Breasted of Chicago. They are of the greatest value in giving the setting of the objects and the characteristics of the country. Other museums will be using them as soon as they realize their importance.) After this type-written matter are placed back numbers of the Museum Bulletin which contain publications of any of the objects in the room. This in general is the idea of the form of gallery leaflet.

It is obviously quite impossible to show all of its adaptations to the requirements of all kinds of collections, but a few words about its value in a gallery of paintings might be of interest. Few galleries in an art museum are changed as often as those containing pictures. The hanging of special exhibitions, or new loans, purchases, or gifts, render any attempt to issue a complete catalog of what is on the walls quite impossible, for one room out of the series is certain to be changed. In this case the catalog as issued is incorrect, and it is well-known that the visiting public do not enjoy purchasing catalogs which are misleading. To reprint such catalogs as often as changes occur would create an expense heavier than most museums would care to incur. But if each room had its own small leaflet, the reprinting would be quite inexpensive, as it would be a matter of a few pages only. This would be all the easier if the description of each picture, when a satisfactory permanent form had been determined upon, were electrotyped. In this way the cost of printing could be still further reduced. If a gallery leaflet of the kind proposed were used in a picture gallery,



the representation of the walls would of course show the location of the painting. In case a drawing was made, the plan of the walls could easily be projected into the horizontal plane, and thus determine the location of the object. I think that it will be agreed that almost always the distance at which the visitor must place himself to read the printed label on a frame is not the proper position to see a painting. This is especially true if we try to keep the label to a size in scale with the picture. Again, if a gallery has so many paintings that it has to skip any of them, the difficulty of reading the label is increased greatly. All of these difficulties and many others can be overcome by means of the gallery leaflet.

I regret that there is not time to show more of the favorable points of such a small publication, but I should be glad to answer any questions at any time about a form which was developed after studying the visiting public at first hand for a number of years, answering their questions and endeavoring to make the collections an educational force.

In closing let me say that at present the Boston Museum is using typewritten gallery leaflets of the type described, supplementing the labels where such have met the requirements of the principles back of the institution, but that the printed form will doubtless come later. When the form is printed, it may be found advisable to leave the last page blank, with a note at the top saying that the page was reserved for the visitor to use for individual notes, should he care to make any. This is a habit which it is the duty of any museum to foster to the highest possible extent.

---

In response to a question Mr. Rowe stated that the gallery leaflets are used at present in typewritten form not to be taken from the room but that it is expected to have them printed for distribution in the near future. The discussion was closed with the following remarks:

*Miss Elizabeth M. Gardiner (Worcester Art Museum).*—"Mr. President, I would like to say one thing in connection with Mr. Rowe's paper. The form he describes is substantially the form used in a number of the smaller museums abroad, only instead of a typewritten leaflet, they have fans scattered about the room with printed information about each picture on the fan. One holds the fan in the hand and goes about from picture to picture and reads from this fan-shaped placard the information. I have found it personally quite the most satisfactory and comfortable way of seeing a small gallery, where I did not have a catalog."



The following paper was then read by Miss Elizabeth M. Gardiner, assistant to the director, Worcester Art Museum:

### THE LIBRARY OF THE SMALLER MUSEUM

In presenting to you some of the questions that have arisen during a year's experience as librarian in the Worcester Art Museum, I want at the very outset to disclaim the authority which would come from professional training. Library work is not my metier. But the branch of it which has fallen to my lot is still so new that I believe any intelligent effort at formulating its especial problems and offering for them solutions based on practical experience will be of service to other pioneers in the same line. The conclusions may be wrong but a wrong conclusion based on concrete facts makes a better starting point for a discussion than vague and cautious generalizations.

The question which faces us first is one whose answer has been assumed in the title of my paper: "Does the smaller museum really need a library? Its income is not large; why not concentrate it on collections?" The answer of any of my own colleagues would be, I know: "The library *is* needed both by the public and by the staff."

The public who already visit the museum will find it an aid to more complete enjoyment of the collections. The purpose of an art museum is of course to afford its visitors the refreshment and uplift of beauty, but if we can add to the first vague, inarticulate response to lovely things a power of discrimination, of analyzing a given object and weighing it against other objects, we have made the pleasure a hundredfold keener. Such discrimination must usually be developed by teaching, and no small museum offers a range of originals wide enough to teach from. I can point as yet to but one or two instances within my own experience where an individual has deliberately sought the library to round out some impression gained in the galleries; but when the library material is brought to the people as illustrations for a lecture, they receive it gladly.

Besides serving the public who would naturally visit us, the library acts as a lure to groups whom the originals alone might not attract; clubs studying some special line not adequately presented in the original would gladly make the museum their meeting place, if it had material in the way of books or photographs. For instance, our own Woman's Club this year studied German art, of which we

have no examples. Had we had proper reproductions available, they would have met with us monthly, and thus have formed the habit of dropping in from time to time to look at our own collections. The same rule applies to the schools, particularly in the history and literature courses. They would turn to the library for illustrative material, and once inside the museum could not fail to stray into the galleries. That this is what actually happens may be seen from the experience of Boston and the Metropolitan and from the relation of other departments to the art library at Wellesley College.

The library is helpful to the public; for the staff it is essential. The director and curators need apparatus within easy reach to help in making attributions. They also require at least the leading periodicals in foreign languages as well as in English to keep them in touch with the art movements of the day and foreign periodicals of special technical character cannot be found in the public library of a small city.

The docent (or, where there is not a docent, the director or curator when he turns to teaching) needs material to refresh his memory and fill in gaps in his supposed omniscience. The keeper of photographs (where there is a photograph collection) must have reference books for help in cataloging. I hardly need enlarge; you all in fulfilment of some one of these offices have either rejoiced in a good library or fumed at a poor one; and you know the difficulties of depending on a public library for books which often may not circulate or if they may be doing it so effectively as to be quite out of reach. We ourselves, though our public library is unusually well equipped and generous, have been obliged more than once to make the forty-mile trip to Boston for material to help in determining, say, the period of a Greek terra cotta or the genuineness of an old Flemish painting.

Aside from the performance of official duties, members of a museum staff who are worth keeping are likely to have ambitions for independent study, and they can hardly be kept permanently at a half-day's journey from a good library.

For the sake, then, of the public, whether as a supplement to interest already aroused or as a means of creating interest, and for the sake of the staff, at least in the performance of its official duties, the library is needed. But the resources for securing it are small. The purchases must at first be limited to essentials. The next step in our inquiry is to determine these essentials.

It will, I think, be generally agreed that the first rank must be given

to good reproductions (photographs or collections of plates). They offer for the studious public and for the staff the closest substitute for direct approach to originals which are out of the reach of some of us all the time and of all of us most of the time. Moreover in a smaller museum, especially a university museum, they may and often do, form a reservoir from which to draw very attractive temporary exhibitions. An adequate nucleus for a collection should consist of representative examples of the sculpture of Egypt, Greece, Rome, and France in the Gothic period; painting of Italy in the trecento and Renaissance; of Holland, Belgium, and Germany in the sixteenth and seventeenth centuries, of England and France in the eighteenth and nineteenth; also enough typical examples of architecture to furnish the setting for the two great decorative arts. If wisely selected it need not consist at first of over 3000 plates; once formed it would easily be enlarged by completing the work of single men or periods as occasion required. We shall see later that, though the number of the nucleus sounds formidable it could be acquired in the course of two to three years, at an expense of \$600 to \$900 per year.

But the photographs will not be serviceable unless properly installed, labeled, and cataloged. For this a small working library is necessary and we may well base our first purchases of books on the needs of the photograph department.

For adequate labeling (it must be borne in mind that the public will read what is written on the back of the photograph where they will not take the trouble to consult books) the first requisite is a set of good general histories of art. For example the field of Italian painting is pretty well covered by Crowe and Cavalcaselle; for the northern schools through 1700 Kugler-Crowe answers passably. For Greek sculpture E. A. Gardner's *Hand Book*; for the medieval period Michel *Histoire de l'Art* and Venturi *Storia dell' Arte Italiana*. These should be supplemented with museum catalogs and, for countries like Italy where the catalogs are often lacking or untrustworthy, by such general lists of works attributed to given artists as may be found in Berenson's series, Lafenestre or the Burckhardt-Bode *Cicerone*. A complete set of up-to-date Baedekers is also essential.

Furthermore as many of the public are eager to learn "who's who in Heaven" the cataloger will want standard works on Iconography. The field for classic and Christian art is pretty well covered by Smith, *Dictionary of Greek and Roman Mythology* (Roscher is of course better but is incomplete), Mrs. Jameson *Sacred, and Legen-*

dary Art, Lowrie, *Monuments of the Early Church*, Didron, *Christian Iconography*, and Mâle, *L'Art Religieux du treizième Siècle en France*.

The reference books, catalogs and iconographical works suggested will be enough to begin on, though the identification of doubtful photographs will be rendered easier by the addition of inexpensive monographs containing reproductions of the entire work of a given painter, such as the *Klassiker der Kunst* and *Kunstlermonographien*.

All of the books already mentioned are useful not only to the keeper of photographs but to the director and curator. The latter will, however, need a supplementary list of special technical publications with good reproductions along lines where photographs are hard to secure or where color is a strongly determining factor (as in the case of Oriental rugs, Chinese pottery, or Greek coins). The purchase of such books may of course be delayed until the special occasion arises, yet if a collection of standard publications is begun early, valuable time may often be saved in emergencies and works in limited editions secured before they acquire those mystic letters "o. p."

The director who is buying old masters will also from time to time ask his librarian to complete the reproductions of some painter already represented in the library or add examples of a minor man in whom he is at the time especially interested.

For periodicals he will require as a minimum, current numbers of one leading English, German, French, and Italian art review of the more scientific sort, of the *American Art News* and the *Repertorium für Kunstwissenschaft* and, if his museum has a classical department, of the four or five official national organs for classical archeology.

For the general public, selection involves a more difficult problem. Of the books useful as staff apparatus, some, the foreign periodicals and museum catalogs, will probably not interest them. They will use the general reference books now and then and the illustrated monographs often. Beyond that, some will turn to us for light on deeper aesthetic laws underlying our paintings (a favorite question is: "Why did Whistler paint 'Fur Jacket's' skirt with those vague daubs? You can't tell where the dress ends and the floor begins; is that natural?"). Others again will demand an appalling quantity of general information only remotely bearing on the contents of the museum. One good lady telephoned me recently to find out what material we could offer on "bells." I was about to suggest that Mrs. William James (our delightful Hogarth lady) and Mrs. Perez Morton (a pet Stuart of mine) might serve her turn when she added, "bronze

ones, you know!" One would like to satisfy all this laudable curiosity, but if the funds are limited so that one must draw a line somewhere I should advocate sending the lady of the bells to the public library, while I should provide for the puzzled student of Whistler some of the really stimulating guides to appreciation; Bode's *Great Masters of Dutch and Flemish Painting*, or Kenyon Cox's illuminating little studies in *Old Masters and New*, or Birge Harrison's *Landscape Painting* will show you the class of work to secure.

Our book collection, then, will consist of a nucleus of standard reference books, catalogs and Baedekers. To these will be added for the staff, monographs and series of plates of a more technical character and a good set of periodicals; for the public a few of the finest essays in criticism.

Is such a collection within the grasp of a small museum? The following summary may help to answer the question:

(a) Photographs. (The recommended number of 3000 to be acquired in two years.)		
1500 photographs, average 35 cents.....	\$525.00	
1500 mounts, average 15 cents.....	225.00	
Library supplies for the photos, cards, accession books, cases, press-board, etc.....	150.00	
	<hr/>	
Total photographs (1500).....		\$900.00
(b) Books.		
Those needed for the librarian (the 111 vols. of catalogs, etc. now in the Worcester collection serving as basis for the list).....	\$370.00	
40 supplementary vols. for the director and the public	230.00	
Binding.....	50.00	
	<hr/>	
Total books (150).....		650.00
Periodicals.....		80.00
Installation of books		
Case, 25 running feet shelf space (6 vols. per ft.)....	\$40.00	
Table.....	40.00	
Periodical rack.....	15.00	
Catalog case.....	15.00	
Accession book.....	10.00	
	<hr/>	
Total installation.....		120.00
		<hr/>
		\$1750.00

That is, all the books and absolutely necessary equipment for the first nucleus and one-half the necessary photographs can be bought at an expense of \$1750.



But those of you who are here to-day will appreciate the fact that the mere price of acquisition by no means represents the entire cost to the museum of any of its possessions, whether books or pictures. To be rendered available to the public and guarded against possible misplacement, each object requires human labor in recording, arranging and cataloging. So the next problem is the library force, what qualifications shall it have and how much can one person put through in a given time.

The accomplishments actually used by a typical museum librarian are: a reading knowledge of French, German, and Italian; general acquaintance with the history of art; enough special training in archeological methods to enable him to weigh authorities and estimate at a cursory glance the value of a new book. Such attainments would be developed by a college course, a year of graduate study, and six months or a year of library training, and would command at minimum a salary of \$1000.

The actual amount that could be accomplished by a well-trained worker in a year may be estimated somewhat as follows: The museum year consists of about forty-six weeks of five and one-half working days each. Omitting all purely mechanical processes, (i.e. book plating, cutting leaves, and pasting on labels, which can be done by an untrained boy) a safe average estimate for the number of books which can be prepared for public use is twelve per six hour day; of photographs, seven to eight, (these estimates are prepared on data furnished by the Metropolitan, Boston Museum, and Wellesley College art library). On this basis, 1500 photographs would require about one hundred and ninety days work; 150 books about thirteen, while the remaining fifty days would be more than filled by correspondence, the making out of order lists, arranging books for the binder, and keeping in touch with the public.

That is, the time of one trained person, with a little untrained assistance would be fully occupied in the care of a library that added to its collections 1500 photographs and 150 books per year.

A museum of modest means can then, form a library which will be of service to its visitors and offer its staff at least a respectable minimum of equipment for their official duties at a total expenditure of \$2750 per year.

Where that sum seems unattainable, the rate of acquisition could be divided and its labor furnished by a person who might act for half time as docent or general assistant to the director. For a larger



institution it will be easy to increase the rate and scope of acquisition and the members on the staff, but whether the library increase slowly or rapidly, the principles that govern its formation are the same.

- (a) Photographs or reproductions are of the first importance.
- (b) For the books, when you have selected those useful in cataloging the photographs, you have already gone far toward supplying the needs of director, curators, and public.
- (c) Last, but emphatically not least, remember that the amount of material which can be prepared for public use by a given person in a given time is limited.

---

Mr. Louis Earle Rowe then presented a paper by Mr. Benjamin Ives Gilman, secretary of the Museum of Fine Arts, Boston.

### MUSEUM REGISTRY OF LOCAL ART

In the paper on "Museums and the Conservation of Monuments" read at the last annual meeting of the Association in Philadelphia, May 12, 1909, it was proposed that each art museum in America should undertake to prepare and maintain an inventory of the works of art outside its walls which are interesting and accessible to its public and to promote the enjoyable and profitable study of them by all. In pursuance of this suggestion the Museum of Fine Arts in Boston, in the following October, announced its purpose to undertake such a registry in a circular addressed to a number of persons responsible as guardians or owners for important buildings, statues, pictures, and other works of art in public places in Boston, the list including representatives of the United States, state and city governments, colleges, and religious and artistic organizations. The announcement was cordially received, the only doubt expressed by any of those replying being whether the objects in their keeping merited this recognition. The Museum was quite prepared to find that this doubt was justified in some cases and quite prepared as well to find it not justified in others. The pressure of work incident to opening the new Museum building in November prevented for a number of weeks any further active effort in establishing the Registry. The initial step in the realization of a purpose completely new to most people must consist largely in verbal explanations of the plan, and such explanations are very costly in time and trouble, demanding much correspondence and

conversation. Within the past few months active steps have been taken to fulfil the design and an immediate report upon the results to the Association before which the idea was broached is in place. There is nothing but encouragement to tell of, and if other museums are contemplating the step, they have a right to know at once all that can be said of the plan.

The comments of the press have been distinctly favorable. There seems to be a general feeling of satisfaction, if not of relief, at the thought that a class of permanent institutions already devoted to the widest interests of the public should have espoused the cause of the people in this necessary particular. Three months after the meeting of the Association at which the plan was first proposed the *Museums Journal* of England, in reviewing a book on "The Care of Natural Monuments" by the director of the Dantzig Museum, expressed its surprise that Dr. Conwentz made no mention of museums among the agencies of their protection, continuing: "It certainly seems to us that the local museum of the district would form a very fitting headquarters for work of this character," and concluding: "Not to urge the point too far, the least suggestion we can make is that the officials of our museums should without delay get into touch with the nearest local association for the preservation of natural monuments." The same journal, in reviewing our *Proceedings* in the issue of March, 1910, refers to the plan of the museum registry of local art as in line with this recommendation of its own and heartily welcomes the suggestion, adding that "It may fall on more fruitful ground on the other side of the Atlantic, where museums have a more open field." In Germany the *Kunstchronik* of May 13th last speaks of the plan as an especially praiseworthy innovation in museum methods and goes on to say: "It would be a real blessing if this novelty should be taken up also in other states of the Union." A private letter from Dr. Grosse, director of the Freiburg Museum, expresses his thorough-going sympathy with the proposal and the views on which it is based. The New York *Nation* speaks of the Registry as a new service "which might well be adopted by museums of all kinds. Like most new ideas this is a simple and obvious extension of the usual duties of a museum." This coincidence of favorable opinion is of good augury. It indicates that the proposed function of the Registry of Local Art may open to museums an opportunity of wide usefulness.

The methods of the work as thus far developed at the Boston Museum are very simple. A representative of the Museum calls by appoint-

ment at the public building, church, or other place where there are objects to register and with the guardian or owner goes about taking notes of the works of art as they are pointed out to him. These hasty notes are supplemented later by further visits, by consultation of the books in the Museum Library or with the officers of the Museum. The data obtained may include documents furnished for safe keeping by the guardians of the works registered and these may include photographs or other illustrations. For the former we have adopted the usual filing system and for the latter a strong box large enough to contain the largest views and which it is planned to keep in the strong room of the Museum. The essential data regarding the works of art are contained in a card index, a serial number being assigned to each entry. The series consists of successive thousands each prefixed with a double letter, AA, AB, AC, etc. Such a series would furnish a far larger number of different designations than the Registry would ever need to use. The folders in the files bear the designation of the index cards referring to their contents. The index cards which we recommend are four by five and seven-eighth inches, somewhat larger than the usual library size and are typewritten in duplicate to form two indexes arranged by guide cards, one according to the artist or school, and the other according to the owner. The notes added at the Museum are expressly understood not to refer at all to pecuniary value. The Museum considers this question aside from its proper artistic function and moreover is not in the way of knowing prices. The purpose of the notes is to put at the service of the guardians and owners, and through them of all who consult the Registry, whatever sources of information the Museum controls. They do not aim to embody final opinions on the objects, but in all cases bear the unwritten proviso "as at present advised."

The record on the index card includes a dating stamp showing the date of the registry, and on the object itself a small parchment seal bearing the number of the object may be affixed as a registration mark.

On the question—what shall be registered—it is made clear that the Museum does not inventory property, however valuable pecuniarily or historically, but only such objects as in its judgment have artistic interest.

Looking at the plan in its larger aspects, it opens a wide horizon. Public museums owe their origin to the nationalization of royal collections. It seems but a further step along the same road for

public museums to include within their scope any outside objects, or collections, of art which states, municipalities, or private owners may commend to their attention. Under this arrangement these outside objects, whether they remain in place or are from time to time seen in the Museum, become practically museum loans, its interest in their exhibition is the same as in its own possessions. Institutions originally the outcome of the nationalization of kings' treasuries have it in their blood to meet the wishes of any other owners who may at any time desire publicity for their treasures. Through the Register of Local Art the loan exhibition may become a field of far greater importance in the economy of museum administration than it has been in the past. The signs point that way. There is scarcely a season when in some exhibition of Rembrandt pictures, Mohammedan art, or French primitives public-spirited owners of works of art do not invite the public to enjoy with them the riches which they individually possess, and whose collective abundance is often unsuspected until thus revealed.

---

The Chair then called for the report of the Auditing Committee which was presented as follows:

*Dr. Oliver C. Farrington (Field Museum).*—"Mr. President, the Auditing Committee reports that it has examined the accounts of the Treasurer and found them correct as reported to the Society."

The report of the Auditing Committee was accepted and it was voted that the Treasurer's report be placed on file.

*President Lucas.*—"When we adjourned this morning we had under discussion a resolution in regard to asking for legislation for the preservation of historical and archeological monuments and objects of interest. The discussion was then incomplete and it was suggested that it might be renewed at this afternoon's session."

*Dr. John M. Clarke (New York State Museum).*—"I desire to say just a word on that subject, Mr. President, without taking too much of the Association's time. It was my misfortune not to be present at the meeting of last year, when I presume these matters were generally brought up which have given birth to this resolution, and also which seem to have fathered the paper of Mr. Gilman. Some two years ago, before Dr. Conwentz gave his lectures in England on the conservation of natural monuments, I memorialized through the Regents of the University, the citizens of this state, in regard to the preservation of natural monuments here, making an appeal to local

societies, historical and scientific, to encourage a watchful guard over objects which were worth while, both natural and archeological objects, and this brings my remarks within the scope of this resolution. There was a generally favorable response to this proposition although I am afraid that so far there has been no organized action taken with reference to these matters. At the same time, so far as the historical objects were concerned, the interest of the American Civic and Historical Preservation Society was aroused, and the outcome of the effort lies in the lap of the gods. I am sure results will follow from these efforts, so that I am very much rejoiced to now learn for the first time of the proposed action by this Association with reference to these matters. In my propositions I had specified by way of illustration certain definite objects worthy of preservation. I recall the fact that the first of them was the case of the Tonawanda swamp near Buffalo, which is the breeding place of many rare birds, and which is so large that it could be conserved only by a joint effort on the part of more than one community acting for a common object. I fancy, for example, that Rochester and Buffalo might get together with their scientific societies and various scientific interests and could get a hold on this spot which has no great commercial value, and by an inexpensive system of patrol preserve that for future generations. I have approached during the past year Mr. Gifford Pinchot, before his connection with the government service was severed, in regard to this matter of conservation of natural objects being taken up by the national committee on conservation. He thought it might. He seemed to think that this kind of conservation was perhaps not included in the original rather vague purposes of the fathers of the national conservation idea. I doubt very much if it was, but at the same time the term might well be enlarged to cover even conservation of natural monuments in the sense in which Dr. Conwentz has used the term. It had been the intention of the American Civic Association to make some definite recommendation to the national conservation committee toward this end. Yet it still remains, whatever recommendations pass through those large organizations, in my judgment, a matter for the locality to look to, and I believe that any action that is contemplated by this Association in this particular direction would find its productive outcome only through the local organizations which are in a position to care for these things.

“This paper of Mr. Gilman’s has been to me exceedingly suggestive, this idea of registering works of note outside of the walls of the



museum and making them essentially a loan collection of that museum. It raises the question in my mind whether it will not be possible for scientific interests in the same way to register local natural objects that are worthy of note and exercise a guardianship, a watchfulness, over them to keep them from destruction, because I think no one realizes as the man who is concerned in the field with natural objects how rapidly objects of merit are passing away from us. The rare tree which may be an exceedingly unusual member of our flora, or the gigantic glacial boulder which stands by itself as a monument of a great record, how easily such things pass out of sight. They are destroyed for slender causes, to get them out of the way, and as time runs on of course these things are rapidly disappearing from the surface of our country.

"I have taken the opportunity, Sir, of making these remarks apropos of this resolution. I feel entirely in sympathy with the general purport of the resolution. I wish it might be expanded to take in not only the objects mentioned, but the natural objects, as I think there are some other agencies that are interested in caring for the objects that are specifically mentioned. I do not know of any agency in this country that is concerned in caring for natural monuments. Why should not this Association take a step in that direction by broadening the expression of that resolution? If the Association passes the resolution, those of us who are intimately interested in these matters will still continue our active concern through the local organizations which can best control and guard these objects."

In the course of further discussion a number of amendments were suggested with the result that the resolutions were finally referred back to the committee for further consideration, with the understanding that a report would be submitted at the next morning's session.

*Mr. Frank H. Severance (Buffalo Historical Society).*—"Mr. President, if the time allows just a moment, I was asked by one or two of our friends at luncheon in regard to the placing of tablets in this part of the country. This is practically the subject that has been under discussion in considering this resolution. I would like to tell you just briefly what we have been doing here in western New York on the Niagara Frontier. Several organizations, including the Buffalo Historical Society, the Historical Society of Niagara Falls, clubs, chapters, and patriotic societies named representatives from their several organizations who constitute a general representative body



known as the Niagara Frontier Landmarks Association. It represents probably eight or ten organizations. Its object is to place suitable monuments or tablets at the sites of historical interest. We have worked together for some five or six years, and have marked historical sites in Buffalo and down the Niagara River, our field being the whole of the Niagara Frontier. We have placed stone boulders with bronze or brass tablets, or erected tablets on the walls of buildings, marking probably a dozen or more historical sites. The work is still going on. Every year we put up a tablet or two to mark some site that is of interest and of real importance in the history of the region, and tomorrow when we go to the Falls some of you will probably notice some of the work of this Frontier Landmarks Association. For instance, on the way to the Falls we pass the site where La Salle built the first ship larger than an Indian bark canoe that was ever on the Great Lakes above the Falls, the site of the old shipyard of the "Griffon," and that is one of the places we have marked by locating boulders and putting on a suitable tablet, and you will see others perhaps about Buffalo or down the River. I mention this simply to inform you a little about what we have been doing in this neighborhood along the line of the resolution you have just been considering."

*Dr. Clarke.*—"I would like to take just a moment to express my very keen appreciation of the remarkable work which Mr. Severance with the support of the Society he represents, and the allied societies, has been doing in this line in this part of the world. It is really a matter of congratulation that the state of New York has within its citizenry a man of his interest, his lively, keen, active interest, not only in the matter of recording local events here, but a broad appreciation of New York State history. I believe that this Society will appreciate a citizen as useful as he is, because so many of us are looking for just such a man as that. I wish there were more of his kind in the world." (*Applause.*)

Mr. Howland then announced the arrangements which he had made for the excursion to Niagara Falls on the following morning and the Association adjourned until evening.

## SESSION OF WEDNESDAY, JUNE 1

*Evening*

The meeting was called to order by President Lucas. Dr. Carlos E. Cummings, secretary of the Buffalo Society of Natural Sciences, then gave a demonstration of lantern slide preparation, consisting in taking pictures of the audience with three cameras exposed simultaneously with one flashlight. These negatives were then developed and dried and lantern slides were prepared in time to be thrown on the screen at the close of the first paper of the evening.

The following paper was then read by Mr. Newton H. Carpenter, secretary of the Art Institute of Chicago:

## THE VALUE OF MEMBERS TO MUSEUMS

I have been carefully looking over the annual reports of our American museums, especially of the art museums, with the object in view of seeing how important a part the members of each of the museums were taking in their financial support and management. This examination has led me to the conclusion that we have not appreciated to the fullest extent the great value that a large membership may be to a museum, nor have we given to this important subject the attention that it merits. I believe that in every community there is a large number of influential citizens who would be pleased to become identified with each of the museums located in it and that they would be of very great financial and moral support. The fact that a museum is open free the whole or part of the time, I do not think would materially affect the number of its members. Nearly all of our museums have incorporated into their organization provisions for one or more kinds of members. There seems to be no uniformity either in the names of the memberships, the conditions necessary to membership, the methods of securing members nor in the financial and moral advantages derived from them. Possibly each one of our museums can be benefitted by a careful study of what the other museums are doing.

Museums that have been founded by a single donor, or that have received ample city or state aid by which their ordinary operating expenses are provided for, have not felt the necessity of securing the coöperation of members as much as other museums not so provided

for. The success in securing members is due in great measure to the necessities. Where a museum has had large demands made upon it and has very small resources with which to meet them, it naturally exerts greater effort in securing members. The success of the Art Institute of Chicago is probably due to the fact that the demands made upon it were greater than upon other museums, while the financial resources to meet those demands were smaller. I would hardly venture to offer as a reason for its success that the citizens of Chicago are more aesthetic or more liberal than the citizens of our Eastern cities.

In order to bring this subject before you for your consideration I am going to take the liberty of explaining to you what the Art Institute of Chicago has accomplished in this very important work. The Art Institute was organized in 1879. Yesterday, May 31st, it completed its thirty-first year. The advisability of associating with it as many of our citizens as possible, was carefully provided for in its by-laws. Three classes of members were created, as follows: Governing Members, Annual Members, and Honorary Members. Governing Members are elected by the trustees upon the unanimous recommendation of the executive committee. They pay an initiation fee of \$100 and annual dues of \$25. They own and control all the property of the Art Institute. A Governing Member's ticket admits to the Museum the owner, family, and any friend, or friends that he may wish to bring in. An Annual Member's ticket for which he pays \$10 a year, admits the owner, family and non-resident guests to the Museum at any time. These are practically all the kinds of members we have ever had. Our by-laws, however, have been so amended that a Governing Member and an Annual Member can be exempt from paying annual dues by making one cash payment of \$400 and \$100 respectively. They are then known as Governing Life Members and Life Members. These life members' fees are put into our endowment funds and the interest on each is credited to our Governing Life and Life Members as their dues. The receipts in dues and fees from members since our organization, thirty-one years, have been as follows:

Governing Members' fees.....	\$38,900.00
Governing Members' dues.....	96,655.00
Governing Life Members' fees.....	14,200.00
Interest on Governing Life Membership fees.....	3,600.80
Annual Members' dues.....	470,120.75
Life Membership fees.....	63,900.00
Interest on Life Membership fees.....	11,482.98
Total.....	<u>\$698,859.53</u>

That is, our members since our organization have paid into the treasury of the Art Institute about \$700,000.

The receipts from members during our first year were small. They have, however, shown a steady increase. During the last fiscal year the receipts have been as follows:

Annual Memberships.....	\$24,955.00
Life Memberships.....	22,400.00
Interest on Life Memberships.....	2,070.76
Governing Memberships.....	200.00
Governing Membership dues.....	3,925.00
Governing Life Memberships.....	1,200.00
Interest on Governing Life Memberships.....	525.91
	<hr/>
Total.....	\$55,276.67

That is, our members have paid into the treasury of the Art Institute over \$55,000 during the past year. To produce this amount of income each year would require an endowment fund of over \$1,300,000 at four per cent. If some wealthy man were to offer us \$1,300,000 on condition of our discontinuing these memberships, we would not consider it for a moment, for we believe that the amount of annual dues will continue to increase each year.

The interest awakened by memberships has often prompted the gifts of paintings or other objects for permanent exhibition, also subscriptions toward our building funds, or the purchase of paintings or art collections for the Institute. Doubtless most of the twenty-five bequests the Art Institute has received have been more or less prompted by the donors being members.

The membership fees, gifts of objects of art, donations, and bequests are by no means all of the benefits that we have received from our members. Their constant interest in the exhibitions, kindly coöperation in our affairs, valuable assistance in our work, and ever-ready advice and sympathy are a constant inspiration and source of encouragement. Of the \$700,000 paid to the Art Institute by the members, \$80,000 has gone into our endowment fund and \$620,000 has been used for operating expenses.

I do not think it out of the way for me to confess that we have had great difficulty in meeting our operating expenses. Had we been deprived of the financial help from our members, it would have been practically impossible to maintain our museum. It is always a pleasure to note how much more interested a person is in the Art

Institute after taking out a membership. Not only do the members take great pleasure and pride in their memberships, but so does every member of their families, and they all have large families. I was very much amused recently to see one of our former students come into our office voluntarily and buy an annual member's ticket. He remarked, "You don't know how much better I feel now; why I feel just as if I had joined the church." I often hear our members speak to their friends with evident pride and enjoyment of the fact of their membership in the Art Institute. It is quite a common occurrence to see the fact mentioned in death notices that the deceased was a member of the Art Institute.

There are two societies closely associated with the Art Institute whose members, by a liberal construction, might be regarded as members of the Art Institute; these are the Antiquarians of the Art Institute and the Friends of American Art.

The Antiquarians of the Art Institute were organized as a society in 1878. The original object of the society was to provide a place in Chicago where decorative articles could be purchased, such as portieres, screens, embroideries, etc. After conducting a business for ten years, our large stores took up this line of work and the society discontinued it. In 1888 the society was reorganized, since which time its object has been to collect antique objects of art and present them to the Art Institute. They have purchased articles and collections costing about \$50,000, and in addition many of the members have made important individual gifts. The articles presented to the Art Institute and the loans from members of the society have nearly filled two of our important galleries. The society has had one bequest of \$5000 from a member, and the income from this fund is to be used for the objects of the society. The members have also been of frequent use to the Institute by assisting at receptions and other important functions.

Nearly all of the works exhibited by the Art Institute have been executed by foreign artists. This very apparent defect in ignoring native artists is now about to be remedied. A number of our patriotic citizens, desiring to increase our collections and encourage American art, are forming a society which will be known as the Friends of American Art. It is patterned after similar societies in Paris for the encouragement of French art. Over one hundred and forty of our good friends have already joined this society, each one of whom has agreed to pay \$200 a year for five years, that is \$1000 each, or a total of \$140,000. It is proposed to greatly add to this number and also to



fix the conditions of membership so that anyone can contribute annually such an amount as he wishes. It is well understood by each society that no object can be purchased without its first being submitted to and approved by the art committee of the Art Institute. This important provision will protect the Institute from being presented with undesirable articles for exhibition. The most active and influential members in each society are those most closely identified with the Art Institute. We therefore feel confident that the purchases made by them will be those most desired by the Institute.

The following clubs and societies have their headquarters and hold their meetings in the Art Institute building. They are all more or less associated with the work being done at the Institute.

- Chicago Society of Artists.
- Chicago Water Color Club.
- Chicago Society of Etchers.
- Chicago Ceramic Art Association.
- Chicago Camera Club.
- The Art Students League.
- The Chicago Society of Amateur Photographers.
- Atlan Ceramic Club.
- Illinois Chapter of the American Institute of Architects.
- Architects Business Association.
- Municipal Art League of Chicago.
- The Antiquarians of Chicago.
- Chicago Horticultural Society.
- Germanistic Society.
- Alliance Française.
- Geographical Society.
- Polytechnic Society.
- Public School Art Society.
- Alumnae Association of Decorative Designers.
- Society of Western Artists.

Nearly all of the members of these societies hold membership tickets in the Art Institute. In addition to the above, about six thousand of our public school teachers hold free admission tickets and some three thousand art students have the privileges of the museum and library.

Most of our museums are in urgent need of additional funds to meet the constantly increasing demands made upon them. There is no easier way to raise funds nor any better way to interest your friends



in your work and to make new friends than by encouraging them to join your membership.

The following statistics will inform you of what the art museums have received from members during the past year.

THE ART INSTITUTE OF CHICAGO

Annual Memberships.....	\$24,955.00	
Life Memberships.....	22,400.00	
Interest on Life Memberships.....	2,070.76	
Governing Memberships.....	200.00	
Governing Membership dues.....	3,925.00	
Governing Life Memberships.....	1,200.00	
Interest on Governing Life Memberships.....	525.91	
	<hr/>	\$55,276.67

THE METROPOLITAN MUSEUM OF ART

Fellows in Perpetuity.....	5,000.00	
Fellows for Life.....	5,000.00	
Fellowship Members.....	7,350.00	
Sustaining Members.....	6,250.00	
Annual Members.....	22,260.00	
	<hr/>	45,860.00

MUSEUM OF FINE ARTS, BOSTON

Annual Membership fees.....	10,920.00	
Annual Contributors.....	13,070.00	
Two Life Membership fees.....	1,000.00	
	<hr/>	24,990.00

JOHN HERRON ART INSTITUTE OF INDIANAPOLIS

Annual Memberships.....	5,000.00	
Life Memberships.....	400.00	
	<hr/>	5,400.00

THE PENNSYLVANIA MUSEUM AND SCHOOL OF INDUSTRIAL ART

Annual Members.....	\$2,805.00	
Life Members.....	1,200.00	
	<hr/>	\$4,005.00

THE BUFFALO FINE ARTS ACADEMY

Life Memberships.....	2,400.00	
Annual Memberships.....	1,108.00	
	<hr/>	3,508.00

## FAIRMOUNT PARK ART ASSOCIATION OF PHILADELPHIA

Annual dues from members . . . . . \$2,380.00

## CINCINNATI MUSEUM ASSOCIATION

Annual Membership fees . . . . . 1,500.00

## DETROIT MUSEUM OF ART

Annual Membership fees . . . . . 1,300.00

---

The remainder of the evening was devoted to a demonstration by Dr. Carlos E. Cummings of lantern slides used in the work of the Buffalo Society of Natural Sciences with the public schools of Buffalo. These slides were intended to illustrate the geography of various parts of North America which Dr. Cummings has visited in the prosecution of this work.

## SESSION OF THURSDAY, JUNE 2

*Morning*

The Association was called to order in the banquet room of the Prospect House, Niagara Falls, at 11 o'clock, President Lucas presiding.

The Chair then asked the Association to take action regarding the place of the next meeting.

The Secretary reported that he had received an invitation from the Conventions Bureau and other organizations in St. Louis to meet in that city in 1911.

Mr. Louis Earle Rowe, on behalf of Mr. Benjamin Ives Gilman, then extended to the Association an invitation to hold its next meeting in Boston. Mr. Rowe stated that this invitation was extended in the name of the following institutions: Museum of Fine Arts, Boston; Boston Society of Natural History; Peabody Museum of Archeology and Ethnology, William Hayes Fogg Art Museum, Semitic Museum, Germanic Museum, and Museum of Comparative Zoology of Harvard University; Peabody Museum, Salem; Essex Institute, Salem; and the Thayer Museum of Ornithology, Lancaster, Mass.

It was voted that the Association accept the invitation to meet in Boston in 1911, the date of the meeting to be arranged by the Council

and the local committee and that thanks be returned for the invitation extended from St. Louis.

*President Lucas.*—"The next piece of business is amendments to the Constitution. Is Dr. Talmage ready to report?"

*Dr. James E. Talmage (Deseret Museum, Salt Lake City).*—"Mr. President, the amendment should take the form of an added article, and as the committee on that matter, I report the following recommendation—that we add Article VIII, to be headed, Amendments to the Constitution, and to read:

'This Constitution may be amended by a two-thirds vote of members present and voting at any meeting, provided that every proposed amendment shall be first considered by the Council and be reported by the Council with or without recommendation.'

After extended discussion as to the advisability of requiring notice of proposed amendments to be submitted in writing to all members of the Association, the Association voted to adopt the amendment as reported by the committee. Dr. Arthur Hollick requested to be recorded as voting in the negative.

The amendment governing the distribution of the published *Proceedings* of the Association was then suggested by Dr. Talmage. The Chair ruled that, under the Constitution as amended, this matter could not be considered at this session.

The committee on historical and archeological objects then reported that it had considered the suggestions made in the discussion on the previous day and submitted the following resolution which was unanimously adopted:

*Resolved*, That it is the sense of the American Association of Museums that proper state and federal laws should be enacted for the acquisition, by condemnation proceedings if necessary, for the exploration, preservation, and proper record and labeling of local objects and places of historic, archeologic, and natural interest; and furthermore,

*Resolved*, That this organization urges that museums and associations of art, history, and science take immediate and proper steps for the recording and labeling of such local objects and places of historic, archeologic, and natural interest.

There being no further business, Mr. Charles R. Toothaker, curator, Philadelphia Museums, then gave a talk on museum catalogs and records. The discussion proceeded as follows:

*President Lucas.*—"It seems to me in the matter of cataloging, each class of material has its own needs, and that the needs of the catalog can only be determined by the institution itself."

*Dr. Charles F. Millsbaugh (Field Museum).*—"I feel that we have hardly time this morning to discuss the question of cataloging. I think probably one session of three days, one of our annual meetings, might be an excellent time to discuss the subject. I think the catalog is the most important part of the whole museum proposition. There is always a chance for the label to be dissociated from the specimen or the specimen from the label. I have the satisfaction of feeling in regard to my collection that you gentlemen could put the whole collection out in the middle of a lot, take a hay-spreader and run through it for an hour, and I could put it all back in the cases again with the labels associated with it. Without a catalog I should feel as though I had not done my duty as curator of a department of a museum."

*Mr. E. L. Morris (Brooklyn Institute Museum).*—"I presume while Mr. Toothaker was speaking every member made an individual reservation that the question of cataloging includes all material, not merely that which Mr. Toothaker mentioned as material on exhibition, as, for instance, in our own museum every specimen of worm that we have that is worthy of keeping is on exhibition. There are perhaps a couple of dozen that require no cataloging. They are their own catalog. But when you get a collection that is only synoptic because of a number of species represented, and most of those species are put away, many of them stored entirely, some catalog system and reference to storage trays or cases is required because of the size of the specimen. Such a catalog is absolutely essential. There are times when the curator is not present. There are times when some citizen comes in who should have at his hand a ready reference by which he can determine what is in the museum, where it is to be found and how much of that group is represented. We have started in the Brooklyn Museum a series of catalog cards in duplicate, one arranged alphabetically for quick reference, the other arranged systematically, which immediately gives a view of how much or how little there is represented in that collection in that group. The accession catalog is a general proposition for the museum as a whole. The subject catalog is a numerical catalog and indicates the material exactly as it is received and the numbers assigned."

*Mr. Frank C. Baker (Chicago Academy of Sciences).*—"I was going to say I think it is an axiom with all natural history museums

that a catalog is absolutely necessary, and the extent of that catalog I think may vary with the idiosyncrasies of the curator in charge. But there should be at least an acquisition catalog and a card catalog so that one can tell at a glance just what is in the museum, not only for the curator's reference but for the reference of any visitor who may come to the museum."

*President Lucas.*—"If Mr. Toothaker will come to Brooklyn we will give him a special session and be glad to show him our catalogs."

Mr. Henry L. Ward, director, Public Museum of the City of Milwaukee, then read the following paper:

#### EXHIBITION OF FOSSILS AND SKELETONS IN POPULAR MUSEUMS

In the average museum, next in order to collections of trimmed rocks, probably no series are of less popular interest than those of paleontological and osteological specimens saving only those sections including mounted skeletons of large and strange appearing extinct animals as Dinosaurs, Titanotheres, Proboscidiens, etc., and of a few recent animals as man, large whales, etc.

The cause of this lack of interest probably is that there is little popular knowledge concerning them; and people generally are not interested in objects of which they know little or nothing unless there is something so remarkable in their size or form as to fix the attention and excite wonder.

That both these classes of objects are important, and if rightly displayed should be popularly instructive, needs no argument, therefore the question that I wish to present for discussion is how best to exhibit them that the public may be interested in and become informed about them.

The usual method of exhibiting fossils, especially botanical and invertebrate forms, is in chronologic series, making geologic eras, periods or epochs the units, and arranging the forms of each of these time divisions in biologic sequence. The resultant popular ineffectiveness seems logical because the suggestion then is that the chief interest does not center in the specimens themselves but rather in their use as markers of geologic time.

At the present day we distinguish paleontologists from geologists and, at least among the former, paleontology is considered a biologic science.

The larger biologic divisions of paleontologic specimens have their modern representatives which have served the paleontologist in arriving at an understanding of the usually imperfect and often distorted and otherwise obscured remains which he studies.

If comparisons of fossil with living forms are necessary for the paleontologist, it seems as though it would aid the average museum visitor in securing some idea of their relationships. In biology there is supposed to be a sequence from earliest life to modern forms, but as this transition has not been linear, as many modern groups have branched from ancient stocks some distance back from their extremes, which latter may have left no descendants, it seems therefore wholly arbitrary and inadvisable to make a chronologic separation between recent and fossil forms in a biologic series.

The average museum visitor may be presumed to have some sort of familiarity with some of the more common living forms of the various classes of animals and plants, which knowledge may serve him to some purpose in becoming acquainted with their relatives; and so it is presumable that if living and fossil forms were arranged together he might to some extent, by comparison of the one with the other, "proceed from the known to the unknown;" which method Huxley stated to be "one of the soundest canons of instruction."

It is unfortunate that there is probably no feasible mode of museum arrangement by which a perfect evolutionary sequence may be exhibited, but assuredly a nearer approximation to such a sequence can be obtained by treating fossil and recent forms in one series than by arbitrarily separating them.

It is also very probable that the popular mind will derive more satisfaction in tracing evolutionary modifications from extinct to recent animals and plants than it will in contemplating them chiefly as geologic markers. It therefore appears to me that the logical treatment of a general paleontologic collection would be to incorporate it with living forms, entirely disregarding the geologic factor. Local paleontologic collections fall into a separate class and should be kept intact. This method of arrangement is not that in general use and so will probably be considered unorthodox; but from my cogitations on the subject it appears that the usual system is a relic from the period when paleontology was merely a time card to the geologist and



not generally considered as a biologic science. As I have seriously in mind following such a scheme in the Public Museum of the City of Milwaukee, I have taken this occasion to bring the matter to the attention of this Association in order that I may be fortified or restrained by the criticisms of others.

The next query relates to skeletons of vertebrate animals which are zoologically of much importance and yet do not seem to be very popular nor to be generally very extensively exhibited even in those museums not primarily maintained for the populace. The most effective method of exhibiting a moderate-sized series of mounted skeletons of all classes of vertebrate animals is a problem that has given me some worry.

The original installation at the Milwaukee Public Museum placed all of the skeletons from mammals to fishes in one series arranged in a row of cases at one side of the mammal hall. Largely as a matter of space convenience, all but the mammal skeletons were removed from this room, the bird skeletons placed in cases at the end of the exhibit of mounted birds and the skeletons of reptiles, batrachians, and fishes placed close by the mounted and alcoholic preparations of these animals. In various museums a further breaking up of the skeleton series is effected by scattering the individual specimens among the mounted skins, placing each along side of the mounted skin of the same species. In some ways this latter arrangement would seem to be the most logical in that, to the general public, the osteology of an animal is unknown, whereas the outer surface, skin, is either known or is sufficiently similar to other known forms as to be quite comprehensible; and so the proximity of the skeleton to the mounted skin makes the former more nearly come into the realm of the known, and permits of a direct comparison of one with the other as to general contour, positions of leg joints, etc. However, from an osteological standpoint these features seem of small importance compared with what Huxley termed "the architectural and engineering part of the business" . . . . "the modifications of similar apparatuses to serve different ends." These can be brought out, if at all, only by arranging the skeletons in a continuous unbroken series, at least to the extent of keeping those of each class in this manner, or by special exhibits of series of parts of skeletons. Only by these means does it seem possible to secure comparison of similar parts of different animals; and this, it appears to me, should be, and probably would be, of more interest to the average museum visitor than would be merely the comparison of the mounted skeletons and skins of the same animals.

Pretty nearly everyone is interested in noting the similarities and differences between the human skeleton and that of an anthropoid ape; and with this as a beginning he might, it seems probable, be readily led into greater osteologic intricacies that would be both pleasurable and instructive.

There is little question that were mounted skins and skeletons arranged in parallel rows separated only by an aisle both comparisons could be readily made; but this would necessitate a much greater parity between the two series than usually exists in popular museums. Only three modes therefore seem practical, first, an osteological series by itself and disconnected from the mounted skins; second, the collection divided into classes and each put near the mounted skins of the same class; third, the individual skeletons each put by the mounted skin of the same species.

As there is considerable opportunity for differences of opinion, and as the matter is of considerable exhibitional importance, I hope that it will be discussed.

---

*Dr. Arthur Hollick (New York Botanical Garden).*—"There is one point in Mr. Ward's paper that I am very glad he brought up, because it is something that has worried me a little; that is, in regard to making collections of fossils, in my case mainly fossil plants, whether they should be strictly geologic or whether they should be exhibited in connection with living plants. The main collection of fossil plants which I described the other day is, as I stated, arranged on a geologic sequence. I will say though that I have been considering, and have already begun to put in operation, a scheme to place a certain number of representatives of fossil plants in a taxonomic collection of living plants on the floor above, so that eventually I hope to have at least one fossil representative of each family of living plants in the systematic collection represented. Just how far we had better go with that I am unable to say, because I have no control over the systematic collection. While I made the suggestion myself, the suggestion ought to have come from the other department to me. I ought to have been asked to put the fossils in with the systematic collection instead of asking them to let me do it. But how far that will be accepted by the powers that be at the Botanical Garden I am unable to say. Personally I should like to see it done very much indeed, and if I am permitted I will have a fossil representative of each living family, and if possible go farther than that and have each order also represented."

*Miss Alicia M. Zierden (Pennsylvania State Museum).*—"May I ask a question, Mr. President? Pennsylvania is rich in many of the carboniferous forms of ferns, etc. Would that be the place for a geological or for a botanical collection?"

*President Lucas.*—"Personally, I should say for both."

*Miss Zierden.*—"But suppose we just have the one collection of specimens. If you just had the one would you display it among the fossils or among the botanical specimens?"

*President Lucas.*—"If I could only have one, I think I should put it among the fossils."

*Dr. A. R. Crook (Illinois State Museum).*—"I think Mr. Ward is quite orthodox in his preference and tastes in this regard. My remembrance and knowledge of the collections in the South Kensington Museum and the museums in Brussels, Berlin, and Munich is that the plan is adopted of following the zoological order and having duplicate collections for the geological series."

*Mr. Wilfred H. Osgood (Field Museum).*—"The other plan that was suggested by Mr. Ward, that of associating skeletons and mounted specimens of mammals and birds, is followed in the British Museum, also I think in the Berlin Museum, and in one or two other European museums, the mounted skeleton being in the same case with the skin. It seems to me that the question that lies back of this whole matter is that of synoptic series versus systematic series. In the synoptic series it would seem necessary to have a collection of skeletons, but in the systematic series of mammals or birds it would be very desirable to have skeletons with them."

*President Lucas.*—"I could speak briefly on this subject in about an hour and a half, but I hope to have the pleasure of a call from Mr. Ward next week, and I have just set myself down for a paper on this subject for the next meeting. (*Laughter.*) It is a subject on which I have very decided ideas. I hope Mr. Ward will give me about half a day on that."

The next paper on the program was then read by Mr. Wilfred H. Osgood, assistant curator of mammalogy and ornithology, Field Museum of Natural History.

LABELING LARGE COLLECTIONS OF MAMMALS  
AND BIRDS

The exhibition label has always been regarded as a detail of great importance, and therefore has been the subject of much thought, discussion, and experiment; but the label of the specimen belonging to the reserve or study series, although more permanent and numerically more important, has received little attention. Curators continually complain that the label will not do all they wish it to, but, although minor points change frequently, the essential characters of the label are the same now as fifty years ago.

The matter of size or compactness is quite important and the effort to attain ideal conditions in this respect or the utter disregard of them is the direct cause of much lack of uniformity. One curator uses a very small label out of respect for the specimen, and perhaps his successor prefers one twice as large with more consideration for the man who writes the label than for the specimen itself or the man who uses it. Very likely each goes to an extreme and a third attempts a compromise. This gives us at least three different sizes and each of these may go through several variations. One wishes certain items of the data on the front of the label and another thinks the same items should be on the back. It is true, the label is a very small affair and the inspection of both sides and all angles is no great task, but nevertheless one who works with large numbers of specimens finds it exceedingly convenient to have each item of the data always in one place; and even if it be only for the sake of appearances, I think it will be generally admitted that uniformity is highly desirable. One of its manifest advantages is the fact that it fosters neatness in clerks and assistants and inspires pride in the appearance and condition of specimens which undoubtedly tends to add years to their term of useful preservation.

The most uniform system of labeling known to me is that of the United States Biological Survey collection which has been formed within the last twenty-five years and fortunately has had the continuous direction of one man of great capacity for detail. Another unusual condition is the fact that the collection has not been derived from miscellaneous sources but has been obtained largely by the Survey's own trained agents to whom labels of uniform style have been supplied in advance. Economy of space is obtained in the Biological Survey label by having the name of the collector and often the general

locality printed on the label in advance. There are no superfluous words printed such as name, locality, date, sex, measurements, original number, etc., which are often seen on labels; but the collector is taught to write these various items in their proper places without any indication from the label itself. A point in which it differs from most museum labels is the position of the space for the museum's serial register number. This is at one end and the number is written transversely instead of lengthwise of the label. This permits a very narrow label, but has the disadvantage of occupying some of the length which is often scarcely sufficient for very long names or those consisting of three words.

The labels of other American collections are frequently larger than those of the Biological Survey and differ somewhat in arrangement of space. The name of the institution is often printed at the extreme top but is divided, leaving space in the middle for the register number. Below is a single ruled line for the name of the animal, and below that another, or an unruled space, for the locality, date, and name of the collector. The economy of space gained by the division of the imprint at the top, however, is not taken advantage of, for these labels are nearly twice as large as those of the Biological Survey and certainly considerably larger than is necessary. But while these seem slightly too large, I am convinced, after a number of years continuous experience with it, that the Biological Survey label is slightly too small for ordinary museum use although as used by the Survey it is satisfactory, owing, as explained, to somewhat exceptional circumstances. It therefore seems possible to effect a desirable compromise between the two sizes by slightly increasing the width over that of the Biological Survey, and, while keeping the actual length about the same, gaining in available length by placing the register number in the middle at the top instead of transversely at the end.

Besides the small size of its label, the Biological Survey collection is noteworthy in another respect: each specimen has only one label, the original written by the collector being also the permanent one. This is due again to the uniform methods under which the collection has been made. Anyone working with it or even casually looking over it cannot fail to appreciate the advantages of this feature. In old collections derived from miscellaneous sources, it is common to see specimens each with two, three, or even half a dozen labels of all sorts and sizes, from tiny tags smaller than a postage stamp to big thick cardboards four or five inches in length and half as wide. Besides the



original collector's label, which may be anything, there are likely to be museum labels commemorative of special expeditions or monographs and various others representing different curators who have served the institution from time to time. Some are dirty and greasy, others quite fresh, some covered with illegible scrawls, others neatly printed, some dangling at the end of long strings, others closely tied. But all are reverently preserved, however the weight and the tangle may shorten the life of the specimen. Even specimens of fairly good size suffer considerably from the wear and tear of such burdensome appendages while very small ones, as shrews, small mice, hummingbirds, warblers, and other small birds, often are seriously mutilated within a very short time. The number of three-legged shrews and mice and birds with broken tails or missing feet would undoubtedly be lessened greatly if labels were smaller, lighter, and less numerous. A multiplicity of labels is usually inconvenient to the one using the specimen, for although each label generally carries a duplication of the information on all the others, it is necessary to examine each one separately for fear something may be overlooked.

It is scarcely to be hoped that all duplication of labels can be avoided in ordinary collections and perhaps the majority of curators would not consider it desirable. Certainly there are very few who do not believe that the original collector's label should always remain attached to the specimen. This being the case, the great majority of specimens will have at least two labels, the collector's and the museum's. If the collector's label could be detached after the data has been copied on the museum label we would have uniformity and better preserved specimens. But if we detach the collector's label we are disposing of the original record and, besides opening the way for errors in transcribing, we are robbing the specimen of some of its individuality. Except in cases where the collector's label is absolutely preposterous and intolerable, detaching the original label seems little short of sacrilege, but it has many advantages. Of course the original label is not destroyed, nor is it removed from the specimen until the museum label has been attached and carefully compared. Then the original label is marked with the register number, cut off, and filed away by some simple system. Thus each specimen carries but one label and the appearance of the collection as a whole is vastly neater than it would be otherwise, while the specimens are subject to much less abrasion and general wear and tear from the labels and strings. At the same time, it is possible in cases of doubt about the data, to refer to the



original label. When proper labels are supplied to trained collectors in advance, it is, of course, unnecessary to make such changes, but it might be advisable sometimes even under these circumstances.

There is an additional advantage in this method of filing which is even more in the spirit of reverence for the original label than leaving it on the specimen. That is, it insures better preservation of the label itself. It might be thought that the label would stand the lapse of time as well as or better than the specimen, but this is not always so. The original label is frequently prepared by an amateur, the paper is poor, and the ink (if ink is used) is not of lasting quality; so as time goes by the paper disintegrates and the inscription fades even under the best conditions, while it often happens that a careless assistant or even an absorbed man of science gives the label rougher treatment than it can stand and it is mutilated perhaps beyond repair. Then there is the grease and dirt which in many cases works out of the specimen and saturates the label. If this be the original label it cannot be renewed, whereas any other can be replaced while the original is safely filed away from dirt and strong light. In our National Museum at Washington where there are many specimens more than fifty years old, and in the British Museum and other European museums where some are more than one hundred years old, one finds in many cases that the original labels have been entirely lost or are so faded, worn, and stained that the inscriptions on them are scarcely decipherable. It is within fair possibility that many of the specimens now going into our study series of mammals and birds may be preserved for two or three centuries at least, and certainly all of them will exist for a very long period. It would seem therefore that the important original label could be more safely kept and rendered useful and reliable for a much longer period if it were filed away from exposure, than if it were allowed to remain attached to the specimen.

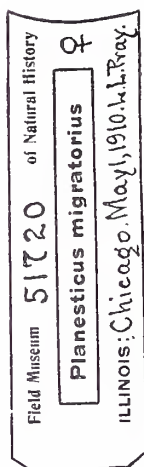
In the long future awaiting these specimens, it is probable that the museum label bearing the name of the species and other data derived from the study of the specimen will need to be changed more than once. This problem, indeed, is as much of the present as it is sure to be of the future. Time after time, a misidentification or a change in nomenclature makes it necessary to alter the labels on a whole series of specimens either by means of erasures or by supplying entirely new labels. Every curator carries it as a perpetual burden. No sooner is a collection thoroughly identified and neatly inscribed with duly authorized names than someone upsets a generic name or dis-

covers a hitherto unrecognized species. A few such rearrangements by the industrious nomenclaturists may effect thousands of specimens even in collections of moderate size and sooner or later the names which have required much patient labor to inscribe must be changed. It is useless to complain of the men who are responsible for the nomenclature—they are doing the best they can and the necessity for change is no more agreeable to them than to others. There are no conspicuous signs pointing to an early millennium in zoological nomenclature and even if there were, the labels on museum specimens would be subject to rather frequent changes on account of hasty and mistaken identifications or differences of opinion as to closely related species or as to the recognition or rejection of various subspecies.

The seriousness of this matter and the loss of time which it occasions in the care of large collections warrants considerable effort to overcome it. From the nature of the case, the evil can only be mitigated. The plan has been suggested of having a name label separate from the one bearing the data. This, however, means two labels for every specimen and is also objectionable because the specimen is liable to some slight injury in cutting away one label and tying on another. It seems more practicable to use some sort of a compound label in which the part bearing the ordinary data conforms to established standards while the part bearing the name is detachable and reversible. As an experiment in this direction, I have had a label made in the form of a narrow envelope open at the end and having a long aperture or wide slit on the front in the space occupied by the name. This incloses a small card on which the name is written or printed and which may be easily slipped out and reversed or replaced by another. Whether this will prove acceptable in other ways will depend upon the test of actual use, but in obviating many of the difficulties just mentioned it appears to have various advantages. It allows of extensive use of the printing press, for in all cases where fifty or more of one species are to be named it will be quicker and neater to have name cards printed than to do the work by hand. In case the names thus printed require change, the card may be reversed and the new name written or printed on the back, thus preserving both names without detracting from the appearance of the label. It is also feasible to use the typewriter, since the paper can be run through the machine in long strips which are later cut into small pieces to fit the label. If it is desired to distinguish any particular specimens by colored labels, as types or topotypes, name cards of any color may be substituted for the ordinary white



1

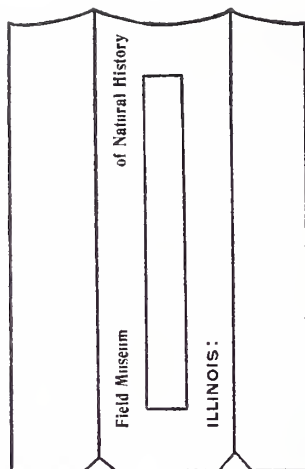


2



3

4



5

## EXPLANATION OF FIGURES

1. Compound label without name card.
2. Compound label with name card in place.
3. Name card.
4. Label with colored name card partly inserted.
5. Label as received from printer.

ones at any time. When labels of this sort are supplied to collectors in the field, the name card may be omitted, and if the collector desires to write brief field notes on the name space he may do so. Although these notes may later be covered by the name card, they will always be accessible. In the same way, notes derived from the study of specimens may be written on the inside space or on the back of the name card, the available space being nearly twice as great as on ordinary labels.

Although no exact figures are available, it is evident that the cost of this label will be somewhat more than that of the usual style. The paper for it must be cut with a die, each label must be scored for folding, and each must be folded and pasted. Threading and printing will be as usual except that the labels must be run through the press one at a time. The total cost, however, can never be prohibitory as even when most of the work is done by hand, a deft-fingered clerk can produce a large number of labels in a day.

---

*Mr. Herbert H. Brimley (North Carolina State Museum).*—"Do you duplicate the specimen number on the insert card?"

*Mr. Osgood.*—"I think that would be desirable although the cards seem to stick in very nicely. There is very little danger that they would fall out and they would stand a good deal of use."

*President Lucas.*—"Mr. Osgood's paper is extremely profitable. It is unfortunate that the three papers which need the most careful consideration and provoke the fullest discussion have come at the last, but it is only the Hindu juggler who can plant seed and pluck the fruit within five minutes, and I trust that the seed planted here will bear fruit at our next meeting. I would suggest that as we had at Chicago an exhibit of museum labels for the exhibition series that we have at Boston an exhibit of catalogs, cards used in cataloging, and specimen labels, and that we put down the papers at the beginning so that we may have free and ample discussion. These have been excellent papers, in fact this whole meeting has been marked by the high quality of its papers."

*Mr. Charles Louis Pollard (Staten Island Association of Arts and Sciences).*—"If you consider it advisable, Mr. President, I would like to move that the Council be instructed to prepare for such an exhibit. I think it would be eminently proper."

*President Lucas.*—"I think we can do that without formal resolution, Mr. Pollard."

The Secretary then proposed the following resolutions, which were unanimously adopted:

*Resolved*, That the sincere thanks of the Association be given to the Buffalo Society of Natural Sciences, the Buffalo Historical Society, and the Buffalo Fine Arts Academy, and to their representatives, Mr. Henry R. Howland, Mr. Frank H. Severance, and Miss Cornelia B. Sage for the hospitality so freely and courteously extended by them to the American Association of Museums.

*Resolved*, That the thanks of this Association be extended to Mr. William G. Justice for his cordial welcome on behalf of His Honor, Mayor Louis P. Fuhrmann.

*Resolved*, That the thanks of this Association be extended to the Country Club and the polo team for hospitalities and courtesies extended.

The following resolution was then read by Dr. W. P. Wilson, and was unanimously adopted:

*Resolved*, That the American Association of Museums learns with sorrow of the death of George Fisk Comfort, L.H.D., LL.D., Director of the Museum of Fine Arts, Syracuse, N. Y., an Active Member of the Association, and that the Secretary be requested to express to the family of the deceased the condolence and sympathy of the Association; and

*Resolved*, That the announcement of death and a brief biographical sketch of the deceased member be published as a necrological record in the next volume of the *Proceedings*.

The following paper by Dr. Charles C. Adams, associate in animal ecology, University of Illinois, was then read by title:

#### THE RELATION OF FIELD EXCURSIONS TO THE ACTIVITIES OF LOCAL MUSEUMS

"Museums may serve three objects. They may be institutions designed to furnish healthy entertainment, they may be intended for instruction and they may be intended for the promotion of research."—*Franz Boas*.

"There's no music like a little river's; It plays the same tune (and that's the favorite) over and over again, and yet does not weary of it like men fiddlers.

It takes the mind out of doors; and though we should be grateful for good houses, there is, after all, no house like God's out-of-doors. And lastly, sir, it quiets a man like saying his prayers."—*Robert Louis Stevenson.*

"The beauty of the world has never been of greath pith or moment to mankind. Its admirers are few, its destroyers are many. . . Will he never learn that happiness is not a matter of possessions, and that mental content, joy of heart, a love of loveliness, are more potent factors in human well-being than naval power or commercial gain."—*John C. Van Dyke.*

Local museums, by force of circumstances, are generally required to encourage all possible methods of arousing interest in their aims and needs. As a result of these conditions, recreation, instruction and investigation, each in turn, demands attention from the curator. Much of that which goes under the name of educational work in museums is more truly described as recreative, a fact which shows that the two phases are not always clearly distinguished, or even distinguishable. Libraries are not founded for instruction merely, but recreation as well, and a similar view is developing concerning the function of museums and their activities. The educational work of local museums usually consists of its exhibits, guide books, and lectures; but by a large part of the public, the exhibits and lectures are treated as a means of recreation as well as of instruction. Museum lecture courses generally aim at variety rather than the continuous development of any subject. The same features characterize the occasional or annual outings or excursions which some museums conduct. These field excursions have not, in the past, been a prominent feature in the activities of museums, but as museums are becoming more intimately related to local needs, this phase seems destined to grow extensively. The writer has been particularly interested in the relation which field excursions may have to museum work, and the aim of this paper is to discuss some phases of this problem which have come up frequently in practical museum work.

As museums come to realize that they have already adapted themselves more or less consciously to the demands of the public for recreation, they will not be so likely to look disparagingly upon excursions which are conducted with recreation as an avowed purpose. Most curators have a distinct liking for and familiarity with the outdoor world, particularly the curators of natural history museums. For this reason, if they have sufficiently varied interests, they are in a position to stimulate appreciation of the natural features of their region; its scenery, its streams, its lakes, its forests, etc., not so much



from the standpoint of the collector or the naturalist as from an aesthetic and humanistic view point. The excursionist may look upon the trip as recreation, the curator as the beginning of a training to appreciate a first-hand knowledge of nature, which even if it leads no further, justifies itself completely. If, however, other interests spring from this soil and the excursionist returns to the fields, or to the museum with a new interest in the other activities of the museum, such excursions are doubly justified.

Much depends upon the spirit in which such an excursion is conducted. A visit to favorable localities is not in itself an assurance of success, for the excursionists must learn to cultivate a frame of mind favorable to the best results. The appreciation of scenery, sunsets, clouds or sounds is not an instantaneous process, but one of growth.

Most successful excursions of the general class are the "Saturday Afternoon Walking Trips" conducted by the Playground Association of Chicago. These excursions are carried on by the coöperation of members of the Geographic Society of Chicago, Illinois Chapter of the Institute of Architects, Woman's Out-Door Art League, Illinois Audubon Society, Chicago Library Club, faculties of the Northwestern University and the University of Chicago, and many other organizations. These excursions have been very successful and show clearly that there is an opportunity, largely undiscovered by museums, which shows how common ground may be found among a large variety of people whose interests at first thought suggest little in common. With the growth of our cities there should be a corresponding growth in these excursions. The aims and plans of these admirable excursions deserve to be known among curators. The following quotation is from the announcement of these walks:

In the vicinity of Chicago there are many tracts of woodland of great natural beauty which can be reached with slight expenditure of time and money. The lake shore with its ravines at the north and forest-covered sand dunes at the south, the three rivers, the wooded hills and the open country—all these offer facilities for recreation and relief from city life that, for the most part, are neglected.

It is felt that there are probably many persons who, for lack of time, or awed by the perplexity of routes offered by twenty-nine radiating railroads, have not ventured forth to enjoy the beauties of nature that lie profusely scattered at the very gates of the city; and that a series of walks, led by guides who are familiar with the regions visited, and who have solved the riddle of the time-tables, will at least serve the purpose of an introduction to Chicago's really beautiful environment.

To this end, you are invited to any or all of the walking trips scheduled below. The excursionists will be under no obligations to join the Playground Association. There will be no fees except those collected with the car fares on each trip.

SATURDAY, MAY 30TH (MEMORIAL DAY)—ALL-DAY OUTING

*The Dunes*

Take Special Train on the Lake Shore & Michigan Southern Railroad, leaving La Salle St. Station at 9:30 A.M., Englewood at 9:45 A.M., arriving at Millers, Indiana, at 10:30 A.M. Returning, special train will leave Millers at 5 P.M., arriving at Englewood at 5:45 P.M. and La Salle St. Station at 6 P.M.

Between Millers and Lake Michigan is the best opportunity to study the sand dune that is offered near Chicago. The dunes here reach a height of 150 feet or more and are covered with a thick forest growth. The effects of their resistless movement may be observed in forests in actual process of being submerged and again in the dead stumps of trees left behind as the dune has slowly shifted forward under the influence of the wind. The "dead end" of the Grand Calumet River will be passed. Few places offer such material for the study of geography in the making.

To the botanist, this territory is of equal interest, as the Flora of the east, west and south have here a common meeting ground.

Take luncheon, canteen or bottle of drinking water and tin cup.

Take waterproofs. Rubbers are not needed as the ground is sandy and rain is immediately absorbed.

A wagon will be provided to carry lunch boxes and extra clothing.

The party will walk two miles to the shore of the lake where luncheon will be eaten. The leaders of the party will build fires and prepare coffee for all. No other fires will be permitted.

After luncheon the party will break into several groups for walks of varying length, all meeting at Millers at 5 P.M.

The dunes and the dense vegetation make this country very confusing to one unfamiliar with it. To avoid becoming lost it will be well to keep in sight of the leaders and to follow their directions carefully.

Nothing but a heavy downpour on the morning of the start need deter anyone from going. A rain the night preceding would but make the sand the more compact, and walking the more easy.

*If intending to take this outing, please notify by postcard Alexander M. Wilson, 51 La Salle St., Chicago.*

Length of walk, 4 miles to 8 miles, as preferred. Expense \$1.

Leaders: Jens Jensen, Miss Amalie Hofer, William Hard, Graham R. Taylor, Alexander M. Wilson.

In the practical conduct of excursions, so much depends upon the leaders and upon the localities visited as to deserve fuller discussion. That the leader of a party and his assistants know the region thoroughly is assumed. In the case of the recreative excursion, the more that can be made of the natural history resources and scenic effects, within reasonable bounds, the better for the interests of the museum. Sounds, as well as scenes, should be carefully considered. The sounds of galloping waves, falling waters, the winds in the trees and the songs

of birds are to be carefully guarded if they are to be appreciated. Sounds, as well as scenic features, are often most advantageously considered in small parties, but with proper foresight many distractions may be warded off, and leaders can often do much to control such circumstances. In case of large excursion parties, some executive ability is needed and this element must be given due weight in the selection of the leader or of some of his assistants.

In observational and collecting excursions, still other qualities are needed in the leader. The guides should have, in addition to a general grasp of the situation, detailed knowledge along certain lines. Several guides may be necessary if the diversity of interests and the extent of the field is large. Each line of special interest may be conducted advantageously as a separate party.

When its aim is clearly defined, the first important step for an excursion has been taken. Considerable caution should be exercised in making a selection; very often too much is attempted. In general, it seems better to attempt less and to do this satisfactorily than to undertake in a single excursion a subject which really warrants several excursions. To maintain simplicity and definiteness of aim, some tact is occasionally necessary. The easiest and shortest route may take the party past some distracting feature which will divert attention from the main aim. Such features should be anticipated and avoided as much as possible, even if the route must be changed. Explanatory excursions, taken out of their proper order, have similar unfavorable effects as the continuity of an explanation is one of its most important features.

In recreative excursions, proximity to water, lakes, streams, sea-shore and other similar natural features, is very desirable and furnishes an opportunity to cultivate an acquaintance with the effects of moving water and other agencies, which may be made to interest large numbers of persons. The plants and animals of such situations are capable of similar interesting treatment. Where water bodies and streams are not available, forests or such topographic features as hills, mountains, cañons, glens, and caves may offer other suitable localities, because of their novelty and scenic features. Historical localities may occasionally be utilized to advantage. From the museum standpoint, it is desirable to emphasize the natural features of the region, to cultivate a first-hand knowledge of them and an appreciation of their cultural value. Such excursions may also be strengthened by supplementary reading.

A second and more frequent form of excursion is the ordinary collecting excursion. This is the favorite of the amateur naturalist and from the ranks of this class of excursionists have perhaps come the largest number of museum curators. The collecting instinct, so useful and essential in a curator, has a chance to develop under supervision on these excursions. The museum may do much for these excursionists through encouragement and guidance. It may also help some of them to carry their work to a stage beyond that of pure collecting and lead them to a practical realization of the local problems and how to investigate them.

Many collectors have developed the habit of collecting as a pastime, and although their excursions take the form of a collecting trip, yet they are primarily recreative rather than educative. Such individuals show how the different kinds of excursionists may overlap and intergrade into one another. These collecting excursions have had, and will continue to have, an important influence upon the growth of museums. These have formed the nuclei about which most of our older museums have grown up, and much of their early growth consisted in the concentration of such collections.

Well-trained collectors are an important element in the development of large and important museum collections. The training of a collector furnishes an experience so valuable in museum work as to make it almost essential to a natural history curator. So important is this factor that I note with surprise that Mrs. Cornelius Stevenson<sup>1</sup> makes no mention of field work in her course of training for curators. This, from my point of view, would be a very serious defect in the training of those who have to deal with natural history collections. In my own experience, I have found that volunteer collectors, largely trained through collecting and observing excursions as amateurs, may give very efficient aid to museum expeditions. As examples of the results of these methods, reference is made to the reports on two museum expeditions: "An Ecological Survey in Northern Michigan<sup>2</sup>," and "An Ecological Survey of Isle Royale, Lake Superior."<sup>3</sup> The museum, in this way is not only serving its public and training collectors, but is also improving the quality and quantity of its own expeditions and collections.

---

<sup>1</sup> *Proc. Am. Assoc. Mus.*, III, 1909, 115-119.

<sup>2</sup> *Ann. Rep. Mich. Geol. Survey*, 1905, 1906.

<sup>3</sup> *Ann. Rep. Mich. Geol. Survey*, 1908, 1909.

Museums have given little attention to the production of local guide books. By the coöperation of collectors and museums, local surveys may also be made. These can serve as scientific surveys and form a basis for guide books for the study of the local natural history resources. Such books will do much to improve the efficiency of museum excursions as well as to help the individual excursionist. Most of the local studies which will serve as aids and guides for excursionists have been prepared by the physiographers and geographers. It is fortunate that they have blazed the trail so well, as may be seen by an examination of the references accompanying this paper. The best local guide book with which I am acquainted, and a model one in many respects, is that edited by Grabau and Woodman on the natural history of the vicinity of Boston. There may be advantages in having more than one kind of a guide book, so that information about different kinds of excursions can be kept distinct and yet easily accessible.

Some of the same localities can be utilized by the observational and collecting excursions as are used by the recreative ones. In such excursions, the localities visited may well be taken up in some definite or systematic order, so that the observations made will have the advantage of some natural grouping of affinities, even though little more than a mention of it is made at the time. In conducting these excursions there is generally a marked tendency to cover too much ground, so that more concentrated attention upon a smaller area becomes irksome. But in general, the better the locality, the less serious is this difficulty. The earlier excursions may well be allowed to cover more ground, and as the momentum of interest increases, the area may be limited and work made more intensive. As interest increases it will often tend to specialize upon certain subjects or upon certain groups of plants and animals. The younger members may well specialize and train their collecting instincts. For my part, it seems that only a very few need to make private collections. There is a marked tendency for excursions to become almost pure collecting trips, but I believe this tendency should be discouraged and more attention should be given to careful observation, comparison and even description of the conditions or organisms in different localities. In the recreative excursions, the taking of notes by the excursionists is generally undesirable, and in collecting excursions, it will be difficult to secure careful ones. In fact, I have found note-taking to be one of the most difficult habits to develop in excursionists. In general, excursionists do not wish to stop and think over what they have seen



and then carefully record their observations and conclusions. This seems to be very generally true of collectors and yet I feel that this is not only desirable for the best collecting but is essential in the training of a field naturalist, and, I may add, of a curator of natural history. It is perhaps undesirable to emphasize this on the early excursions, and only when sufficient interest and momentum have been developed should this receive more attention.

To secure the best results from the observational excursion, the work must be individual rather than confined to the leader or a few of the more wide awake members, while the others go along as passengers, as it were. To insure individual work, it may be necessary to break up the party into groups small enough so that each may receive some individual attention. Full equipment for collecting or study will do much to favor individual activity.

A third form of excursion I have called explanatory. This is the excursion intended primarily not to collect specimens but to collect explanations, or for the purpose of interpretation. Its relation to other excursions may in some ways be compared with the relation which ordinary synoptic exhibits bear to complex modern groups in our museums; the synthetic element is to predominate over the analytic. In a certain sense many excursions may be considered as explanatory, but the usual form of a collecting excursion certainly does not belong in this group or even those excursions which deal primarily with analytical details. The explanatory excursions which I have in mind deal with general and complex relations, treated from a synthetic standpoint. They are intended to develop general conceptions of out-door relations. This form of excursion has been greatly neglected by a large number of our educational institutions, and particularly by museums.

In the explanatory excursions the selection of the leader, the localities and the order of their study is of the utmost importance. Generally speaking, this is the most difficult kind of excursion to conduct successfully. It is desirable that the localities visited should be taken up in such an order as to show the stages in the development of the subject which is being interpreted. Even many very elementary subjects, when presented in this way have a new interest and charm, and really never grow uninteresting; such are the active agents of nature—the rolling waves, running waters, a brook, the responses of vegetation and animals to their conditions of life. A study of such activities is best taken up in a developmental order and any departure



from this is made at a serious sacrifice, even with experienced persons. The perfect continuity of the processes studied should be one of the most distinctive features of this kind of excursion.

These excursions assume more preparation on the part of the excursionist, and it will be found to be a form of mental food most easily digested by the strong. Some system of careful note taking seems to me an essential in this work; at least for the average person. Such excursions will not appeal to the masses and are not planned for them, except in the simpler phases.

As a part of this series, I should be inclined to include a field study of the development of constructive or synthetic conceptions of natural phenomena. The interrelations of forces and the interrelations of organisms may be considered for their bearing upon general problems and conceptions. The struggle for existence can best be learned in the field. But how many have ever attended an excursion devoted to the study of this problem?

After the excursion has been made and good results have been secured, they need to be cared for as a regular part of curatorial duties so that the interest and momentum which have been developed will not be starved through lack of nourishment. I do not intend to discuss this phase further than to indicate that this aspect of the work must form an essential part of any comprehensive plan.

The excursions represent only a part of the recreative or educational work of a museum, and a part which cannot be replaced by exhibits, lectures or any amount of reading. Excursions, properly planned and executed will add much to the interest taken in the lectures and exhibits and will lead to more intelligent reading. Last, but not least, they will cultivate a genuine love for the out-door world and its beauty and help, in these days of sensational amusements, to make more general a healthful and better recreation for a large number of people. The educational phase of such excursions must be planned upon a truly scientific basis and should be so conducted as to afford some training in the scientific method, because in so far as museums are educational, they must realize these ideals.

From the preceding discussion, we may conclude that an ideal series of excursions for a local museum would consist of a series, each complete in itself, and ranging from those intended primarily to be recreative, to the collecting and observational, and on to those which are primarily explanatory of the local problems or of the general principles of science. In this manner the greatest numbers of the public may be reached,

their interests recognized and the confusion, which results in attempts to combine several kinds of excursions into a single one avoided. In time, some excursionists will naturally graduate from one series to enter others, but this does not argue in favor of combining the different kinds of excursions. It is desirable to allow each kind to retain its identity and serve its natural function.

I do not understand that museum exhibits are intended to be so entirely satisfying that the visitor has no desire to become acquainted with out-door nature, so with lectures and exhibits there should be abundant chances for the museum visitor to become directed to the out of doors. In general, museums are the local institutions which are best organized, interested, and qualified to undertake such work, although there are important exceptions to this rule.

#### REFERENCES

The following list of references will perhaps prove suggestive for those planning excursions along recreative and educational lines. Completeness is not attempted.

ATWOOD, W. W. and GOLDTHWAITE, J. W.

1908. Physical Geography of the Evanston-Waukegan Region. *Bull. No. 7*, Ill. Geol. Surv., Urbana, Ill.

This exemplifies the educational resources of a limited area from the standpoint of the physiographer.

CARMAN, J. E.

1909. The Mississippi Valley Between Savanna and Davenport. *Bull. 13*, Ill. Geol. Surv.

The latest of several educational handbooks to local physiographic problems prepared under the direction of Prof. R. D. Salisbury for the Ill. and Wis. Surv.

COMSTOCK, J. H.

1897. Insect Life. New York.

Contains useful chapters on the insect life of ponds, brooks, forests, roadsides, etc.

COWLES, H. C.

1901. The Plant Societies of Chicago and Vicinity. *Bull. No. 2*, Geographic Society of Chicago.

This shows the possibilities for the study of vegetation near a large city. The best of its kind.

## DAVIS, W. M.

1909. Geographical Essays. Chicago.

Contains several papers of important bearing upon field work in physiography and geography.

## EMERSON, PHILIP.

1899. Some Suggestions for Excursions with Elementary Classes.

*Jour. School Geogr.*, 3, pp. 287-296.

## FENNEMAN, N. M.

1902. On the Lakes of Southeastern Wisconsin. *Bull. No. 8*, Wis. Geol. and Nat. His. Surv., Madison, Wis.

This will indicate many features of interest to be found about smaller lakes.

1909. Physiography of the St. Louis Area. *Bull. 12*, Ill. Geol. Surv.

## GIBSON, W. HAMILTON.

1883. Highways and Byways; or Saunterings in New England. New York.

1886. Happy Hunting Grounds: a Tribute to the Woods and Fields. New York.

1891. Strolls by Starlight and Sunshine. New York.

1897. Eye Spy: Afield with Nature Among Flowers and Animate Things. New York.

1898. My Studio Neighbors. New York.

1904. Sharp Eyes: A Ramblers Calendar of Fifty-Two Weeks among Insects, Birds, and Flowers. New York.

All of Gibson's books will arouse interest and direct it toward the beautiful which is to be seen in the animal and plant world. The artist and the naturalist can here find common ground.

1908. Pastoral Days; or Memories of a New England Year. New York.

## GOLDTHWAITE, J. W.

1909. Physical Features of the Des Plaines Valley. *Bull. No. 11*, Ill. Geol. Surv.

Another good illustration of the chances for local studies in physical geography.

- GRABAU, A. W. and WOODMAN, J. E. (Editors).  
1898. Guide to Localities Illustrating the Geology, Marine Zoology and Botany of the Vicinity of Boston.  
Each chapter is written by a specialist. The plan of this guide makes it far superior to all others I have seen. A model guide book for excursions.
- GULLIVER, F. P.  
1903. Out-of-Door Class Work in Geography. *Proc. Nat. Educational Assoc.*, 1903. pp. 857-858.
- MARTIN, J. O.  
1900. A Brook. *Cornell Nat. Study Quarterly No. 5*, Cornell University.
- MEYERS, IRA B.  
1908. Field-Work and Nature-Study. *The Elementary School Teacher*, 8, pp. 225-232, 316-326, 381-392.  
A valuable discussion of the pedagogical aspect of field work.
- ORR, WM.  
1901. An Outline of Eight Excursions for the Study of the Physical Geography and Geology of Springfield and Vicinity. City Library Association, Springfield, Mass.
- SALISBURY, R. D. and ALDEN, W. C.  
1899. The Geography of Chicago and Its Environs. *Bull. No. 1*, Geographic Society of Chicago.
- SALISBURY, R. D. and ATWOOD, W. W.  
1900. The Geography of the Region About Devil's Lake and the Dalles of the Wisconsin. *Bull. No. 5*, Wis. Geol. and Nat. His. Survey.  
Illustrates the possibilities to be found in local studies. One of the best.
- SMITH, ROBERT.  
1900. Home Lore; Plant Associations and Their Distribution. *Jour. School Geography*, 4, pp. 287-295.  
Shows the value of studying the local plant associations. Deserves to be better known.

TRAFTON, GILBERT H.

1905. Laboratory and Field Exercises in Physical Geography. Chicago.

Contains an excellent list of references on field work in physical geography, on pp. 83-85.

VAN DYKE, JOHN C.

1901. The Desert. Further Studies in Natural Appearances. New York.

The arid regions also have their advantages for the field excursionist.

1904. Nature for Its Own Sake. First Studies in Natural Appearances. New York.

J. C. Van Dyke's books will open the eyes of many field workers to a new world of beauty and charm. Every curator of a natural history museum should know this book.

1906. The Opal Sea. Continued Studies in Impressions and Appearances. New York.

A book for the seashore excursionist or a traveler.

The following paper by Dr. Alexander G. Ruthven, head curator of the University of Michigan Museum, was then read by title:

## ORGANIZATION OF NEW MUSEUMS OF NATURAL HISTORY

Among the numerous questions that a curator is called upon to answer, if the experience of the writer is an index, one that is not the least frequent is the request for information by the founders of new museums. Such appeals do not come in vain to one who is interested in the work, and I have often attempted to formulate a set of suggestions that would make as definite as possible my responses to such requests. As I should have expected, however, I have found this impossible, principally for two reasons. In the first place my experience has been too limited to permit me to speak with authority on some points, and, secondly, the aims of the proposed institutions are so diverse that no one set of suggestions will apply to all of them.

Even a limited experience, however, brings out strikingly to one who handles museum material that, in the case of natural history museums



which have a small beginning, there are two general precautions that should be taken at the outstart to insure for the institution the most efficient future, whatever its field of activity is to be. The proper care of the incipient museum means, I believe, among other things, that, as soon as the institution is founded, (a) the field of work should be outlined as definitely as possible, and (b) permanent systems of recording data should be installed. These two principles are commonly recognized as being among the cardinal necessities<sup>1</sup> in museum administration, but I believe they should also be emphasized as important ones to be kept carefully in view during the early days of the institution, for the troubles that result from their neglect can more easily be prevented than cured. A consideration of some of these results will make this evident.

Many of our museums, particularly the smaller ones, have been and are being started in a haphazard manner and with the idea that a policy and cataloging system can be worked out after the collections have attained to some size. I need mention only two probable results of such a beginning. In the first place it generally means that the museum receives a lot of useless material from well-meaning but misinformed friends, and this material (which is often entailed) or the confusion which it causes in the catalogs remains a source of perpetual annoyance to the curators. In the second place it means great opportunity for error in the records, for not only will data fail to be recorded when an inadequate system is employed, but there remains the further danger that errors will creep in if the records are ever transcribed to form a part of a permanent system. That there is always danger in transcribing data is so well recognized that any conscientious curator would feel compelled to preserve the original records and numbering for safety, thus increasing the complexity of the system.

I have mentioned what I believe to be two of the most general causes of future difficulties that date from the early days of the museum. That they are real sources of trouble most of you will readily admit, for what trained curator in these times does not have cause to condemn the short-sightedness of some of his predecessors who felt free to accept anything in the way of a specimen, with or without data, and to in-

---

<sup>1</sup> Compare *The Principles of Museum Administration*, by G. Brown Goode. *Ann. Rep. Mus. Assn.* 1895. Reprinted *Ann. Rep. Smithsonian Inst.*, 1897, pp. 195-240.

augurate new systems of serial numbers from time to time, leaving to his successors a heritage of material that is either valueless or too good to throw away and not good enough to keep.

It is evident, of course, that the best way to avoid these difficulties is to engage a trained curator at the outstart. In other words to have the curator precede the collections and not the collections the curator. If, however, it is impossible to obtain a trained curator from the beginning, I believe that if great care is taken from the first to properly circumscribe the field of activity and to install systems of recording data that will be permanent and elastic, much will be accomplished toward insuring for the museum an efficient maturity.

---

*President Lucas.*—"Before making a motion to adjourn, I should like to say that the presiding over the sessions of this meeting has been both a pride and a pleasure. I feel that the Buffalo meeting has been a great success. We were cordially welcomed, we have been most hospitably entertained, we have heard many important papers and much valuable discussion. We have had the pleasure of meeting many of our fellow workers from all parts of the country, and it is with great regret on my own part that I feel the time is near when we must say good-by to one another and to our Buffalo friends. I am sure that each and every one of us can say as a certain eminent citizen said to my friend Dugmore, 'I have had a bully time.'"

Announcement was then made of an excursion for the afternoon through the Niagara Gorge, after which the Association adjourned to meet at Boston in 1911.

---

## APPENDIX

# APPENDIX

## CONSTITUTION OF THE AMERICAN ASSOCIATION OF MUSEUMS

### ARTICLE I

#### NAME

The name of this Association shall be "The American Association of Museums."

### ARTICLE II

#### OBJECT

The object of this Association shall be to promote the welfare of Museums, to increase and diffuse knowledge of all matters relating to them, and to encourage helpful relations among Museums and those interested in them.

### ARTICLE III

#### MEMBERSHIP

All Museums officially represented at the first meeting of this Association, held at the American Museum of Natural History in New York, on May 15, 1906; all persons taking part in the organization of this Association, or who on the above date, or prior thereto, have by letter signified their wish to become members of the Association, shall become Charter Members on payment before the next annual meeting of the Association of the fees hereinafter provided for.

The Members of the Association shall be Active, Associate, Sustaining and Honorary.

Persons actively engaged in the work of Museums may become Active Members on the payment of three dollars per annum, and may become Active Members for Life upon payment of thirty dollars at any one time.

Persons contributing one dollar per annum may become Associate Members.

Each Museum paying not less than ten dollars a year shall be a Sustaining Member of the Association, and through its chief executive officer or a properly accredited representative, shall be entitled to cast a vote on all matters coming before the Association.

Persons distinguished for eminent services, either to the cause of Museums or to this Association, may become Honorary Members. The number of Honorary Members shall be limited to fifteen. When ten Honorary Members have been elected then thereafter not more than two such members may be elected annually.

Active and Sustaining Members only shall have a right to vote, and Active Members only may hold office.

Any Museum or person proposed in writing for Active, Associate, or Sustaining Membership by a Member of the Association, and approved by the Council, upon the payment of the proper fee shall become a Member of the Association.

Any person contributing five hundred dollars or more at any one time shall become a Patron of the Association.

## ARTICLE IV

### OFFICERS

The officers of the Association shall be a President, two Vice-Presidents, a Secretary, and a Treasurer, and six other persons designated as Councillors, and these eleven shall constitute the Council. The President and two Councillors chosen by the Association shall retire annually, and for one year shall be ineligible for re-election to the same office.

## ARTICLE V

### COUNCIL

The general control of the affairs of the Association, except as otherwise herein provided, shall be vested in the Council.

## ARTICLE VI

### ELECTION OF OFFICERS

Officers shall be elected by ballot at the annual meeting.

The Council shall have power to fill any vacancies which may occur in its membership between annual meetings.

## ARTICLE VII

### MEETINGS

A general meeting shall be held in each calendar year. Special meetings may be appointed by the Association or called by the Council. The time and place of the annual meeting shall be determined by the Association. In order to diffuse a knowledge of Museums and their work, the Association shall meet in a different city or town each succeeding year, unless otherwise determined by the Association.

At the annual meeting papers may be read, matters relating to Museums discussed, and any business relating to the affairs of the Association shall be transacted.

Special meetings may be called by the Council in emergencies, and only matters stated in the call shall be considered at such special meetings.

## ARTICLE VIII

### AMENDMENTS

This Constitution may be amended by a two-thirds vote of the members present and voting at any meeting, provided that every proposed amendment shall be first considered by the Council and be reported by the Council with or without recommendation.

REPORT OF THE TREASURER OF THE AMERICAN ASSOCIATION  
OF MUSEUMS, PRESENTED AT THE ANNUAL MEETING  
BUFFALO, MAY 31 — JUNE 2, 1910

Balance on hand at meeting, May 10, 1909..... \$640.01

RECEIPTS

1	Active membership for year ending May 15, 1909.....	2.00
161	Active memberships for year ending May 15, 1910.....	322.10
8	Active memberships for year ending May 15, 1911.....	15.98
2	Sustaining memberships for year ending May 15, 1909.....	20.00
30	Sustaining memberships for year ending May 15, 1910.....	300.00
1	Life membership.....	30.00
	Extra reprints for members.....	70.08
	Sale of publications.....	24.18
	Total receipts.....	<u>\$1424.35</u>

EXPENDITURES

1909

May 20,	To Philadelphia Museums (printing 500 programs; 200 circulars of notification).....	\$6.35
June 11,	To Grace D. Calvin (reporting proceedings).....	75.00
June 14,	Philadelphia Museums (telegram).....	.33
June 28,	Southern Printers Supply Co. (halftone electros)....	7.25
Aug. 7,	P. M. Rea, Secretary (clerical assistance to July 1)..	25.00
Sept. 23,	Postage Stamps for Treasurer.....	5.00
Oct. 6,	Postage Stamps for Treasurer.....	4.00
Oct. 9,	Philadelphia Museums (500 envelopes and print- ing).....	1.10

1910

Feb. 15,	Williams & Wilkins Co. (Printing of <i>Proceedings</i> and reprints of papers).....	472.72
Feb. 15,	Williams & Wilkins Co. (expressage).....	.75
Mar. 7,	To Sassard Bros. (stationery for Secretary).....	2.15
Mar. 7,	To Office Supply & Fixture Co. (card index, cards, carbon paper, typewriter cover).....	20.77
Mar. 7,	To Daggett Printing Co. (stationery for Secretary)..	11.00
Mar. 7,	To Paul M. Rea, Secretary (expressage, freight, sup- plies, clerical assistance).....	60.99
Mar. 29,	To Paul M. Rea, Secretary (Salary of Assistant, November to March, 5 mos.).....	260.00

Carried forward.....\$952.41 \$1424.35



Carried forward.....	\$952.41	\$1424.35
Apr. 7, To G. E. Stechert & Co. (1 copy Minerva, 1909-10).....	4.04	
Apr. 28, To Paul M. Rea (typewriter rent, postage, office supplies, expressage, and clerical and stenographic assistance).....	223.13	
Apr. 28, To Daggett Printing Co. (350 announcements).....	7.50	
Apr. 28, To Sassard Bros. (stationery).....	6.50	
Apr. 28, To Office Supply & Fixture Co. (supplies, typewriter rent, etc.).....	6.05	
May 10, To Philadelphia Museums (printing 500 note heads).....	1.00	
May 13, Postage Stamps for Treasurer.....	.93	
May 15, To A. A. Clinger (stenographic and clerical work for Treasurer for year ending May 15, 1910).....	50.00	
	<hr/>	
Total Expenditures.....		\$1251.56
		<hr/>
Balance in Treasury May 28, 1910.....		\$172.79

W. P. WILSON  
*Treasurer.*

Examined and found correct:  
O. C. FARRINGTON,  
FRANK C. BAKER,  
HENRY L. WARD,  
*Auditing Committee.*

## MEMBERS OF THE AMERICAN ASSOCIATION OF MUSEUMS

## LIFE MEMBERS

The asterisk (\*) denotes a Charter Member.

- Crook, A. R., Curator, Illinois State Museum of Natural History, Springfield, Illinois.
- Graves, F. P., Graves Private Museum, Doe Run, Mo.
- \*Hall, Robert C., Owner, Hall Museum of Anthropology, 240 Fourth Ave., Pittsburgh, Pa.
- \*Henshaw, Samuel, Curator, Museum of Comparative Zoology, Harvard University, Cambridge, Mass.
- \*Holland, W. J., Director, Department of the Museum, Carnegie Institute, Pittsburgh, Pa.
- \*Minot, Charles S., Harvard Medical School, Boston, Mass.
- Parrish, James C., Southampton Art Museum, Southampton, Long Island, N. Y.
- Parrish, Samuel L., Southampton Art Museum, Southampton, Long Island, New York.
- \*Talmage, James E., Director, Deseret Museum, Salt Lake City, Utah.
- Thayer, John E., Director, Thayer Museum, Lancaster, Mass.

## ACTIVE MEMBERS

- \*Adams, Charles C., Associate in Animal Ecology, University of Illinois, Urbana, Illinois.
- Adickes, Thomas W., Assistant Curator, North Carolina State Museum, Raleigh, North Carolina.
- Aitkin, Helen J., Assistant, Brooklyn Institute Museum, Brooklyn, N. Y.
- \*Akeley, C. E., Taxidermist-in-chief, Field Museum of Natural History, Chicago, Illinois.
- \*Allen, J. A., Curator of Mammalogy and Ornithology, American Museum of Natural History, New York City.
- \*Ami, Henry M., Geological Survey of Canada, 453 Laurier Ave., East, Ottawa, Canada.
- Atkinson, D. A., Custodian of Reptiles, Carnegie Museum, Pittsburgh, Pa.
- Austin, Thomas L., Curator, Erie Public Museum, Erie, Pa.
- \*Baker, Frank C., Curator, The Chicago Academy of Sciences, Lincoln Park, Chicago, Ill.
- \*Barber, Edwin Atlee, Director of Museum, Pennsylvania Museum and School of Industrial Art, Philadelphia, Pa.
- \*Barbour, Erwin Hinckley, Curator, State Museum, Lincoln, Neb.
- Barrett, S. A., Curator of Anthropology, Public Museum of the City of Milwaukee, Milwaukee, Wis.
- \*Beatty, John W., Director, Department of Fine Arts, Carnegie Institute, Pittsburgh, Pa.

- \*Bennett, Bessie, Assistant to the Director, The Art Institute of Chicago, Chicago, Ill.
- \*Berg, George L., Director, Washington State Art Association, Seattle, Wash.
- Bethel, Ellsworth, President, Colorado Academy of Sciences, Denver, Col.
- Beutenmüller, William, Curator, Department of Entomology, American Museum of Natural History, New York City.
- Bibbins, Arthur Barneveld, Curator of the Museum, Woman's College, Baltimore, Md.
- Blackman, Elmer Ellsworth, Archeologist, Nebraska State Historical Society, Lincoln, Neb.
- \*Brigham, William T., Director, Bernice Pauahi Bishop Museum, Honolulu, H. I.
- Brimley, Herbert H., Curator, North Carolina State Museum, Raleigh, N. C.
- \*Britton, N. L., Director-in-chief, New York Botanical Garden, Bronx Park, New York City.
- Brock, Clarence L., Director, Houston Museum and Scientific Society, Houston, Texas.
- Brown, Arthur Erwin, Vice-President, Academy of Natural Sciences; Director, Zoological Gardens, Philadelphia, Pa.<sup>1</sup>
- Brown, Charles E., Chief, State Historical Museum of Wisconsin, Madison, Wisconsin.
- Brown, Stewardson, Conservator of Botanical Section, Academy of Natural Sciences, Philadelphia, Pa.
- \*Bryan, William Alanson, President, Pacific Scientific Institution, Box 38, Honolulu, H. I.
- \*Bryan, Mrs. William Alanson, Box 38, Honolulu, H. I.
- Bryant, William L., Custodian of Museum, Buffalo Society of Natural Sciences, Buffalo, N. Y.
- \*Bumpus, Hermon C., Business Manager, University of Wisconsin, Madison, Wisconsin.
- \*Burchard, Edward L., Director, Social Museum, Chicago School of Civics and Philanthropy, Chicago, Ill.
- Carpenter, Newton H., Secretary, The Art Institute of Chicago, Chicago, Ill.
- Chapin, Willis O., President, Buffalo Fine Arts Academy, Buffalo, N. Y.
- \*Clarke, Sir Casper Purdon, Director Emeritus, Metropolitan Museum of Art, New York City.<sup>2</sup>
- Clarke, John M., Director, New York State Museum, Albany, N. Y.
- Clowes, Herbert, Landscape Modeler, Public Museum of the City of Milwaukee, Milwaukee, Wis.
- Coggeshall, Arthur S., Preparator-in-chief, Department of Paleontology, Carnegie Museum, Pittsburgh, Pa.
- \*Collie, George L., Curator, Logan Museum, Beloit College, Beloit, Wis.
- \*Comparette, T. Louis, Curator, Numismatic Collection, United States Mint, Philadelphia, Pa.
- Cory, Charles B., Curator of Zoology, Field Museum of Natural History, Chicago, Ill.

---

<sup>1</sup>Died October, 1910.

<sup>2</sup>Died March 29, 1911.

- Courtney, Mrs. Elizabeth D., Assistant, Carnegie Museum, Pittsburgh, Pa.  
 Covert, Adolphe Boucard, Taxidermist, 5411 Madison Ave., Chicago, Ill.  
 Cummings, Carlos E., Secretary, Buffalo Society of Natural Sciences, Buffalo, New York.  
 Dahlgren, B. E., Modeler, Department of Botany, Field Museum of Natural History, Chicago, Ill.  
 Dana, John Cotton, Secretary, Newark Museum Association, Newark, N. J.  
 \*Dean, Bashford, Curator of Fossil Fishes, American Museum of Natural History, Curator of Arms and Armor, Metropolitan Museum of Art, New York City.  
 \*de Forest, Robert W., Trustee and Secretary, Metropolitan Museum of Art, New York City.  
 \*Dorsey, George A., Curator of Anthropology, Field Museum of Natural History, Chicago, Ill.  
 Douglass, Earl, Assistant in Research Section of Paleontology, Carnegie Museum, Pittsburgh, Pa.  
 \*Dow, George Francis, Secretary and Curator, The Essex Institute, Salem, Mass.  
 \*Dyche, L. L., Curator of Birds, Mammals, and Fishes, State University, Lawrence, Kan.  
 \*Eastman, Charles R., Curator of Vertebrate Paleontology, Museum of Comparative Zoology, Harvard University, Cambridge, Mass.  
 \*Eigenmann, Carl H., Curator of Ichthyology, Carnegie Museum, Pittsburgh, Pennsylvania.  
 Emerson, Alfred, Assistant to Director, The Art Institute of Chicago, Chicago, Illinois.  
 Failing, Henrietta H., 617 Johnson Street, Portland, Oregon.  
 Fairbanks, Arthur, Director, Museum of Fine Arts, Boston, Mass.  
 \*Farrington, Oliver C., Curator of Geology, Field Museum of Natural History, Chicago, Ill.  
 Foulke, J. B., Administrative Assistant, American Museum of Natural History, New York City.  
 \*Fox, William Henry, Managing Director, John Herron Art Institute, Indianapolis, Ind.  
 \*French, Wm. M. R., Director, The Art Institute of Chicago, Chicago, Ill.  
 Fuller, Robert Gorham, Assistant in American Archeology, Peabody Museum, Cambridge, Mass.  
 \*Gallup, Anna Billings, Curator, Children's Museum, The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.  
 Gardiner, Elizabeth M., Assistant to the Director, Worcester Art Museum, Worcester, Mass.  
 \*Gest, J. H., Director, Cincinnati Museum Association, Cincinnati, Ohio.  
 \*Gilman, Benj. Ives, Secretary, Museum of Fine Arts, Boston, Mass.  
 Gittings, Maud J., Custodian of Library, Carnegie Museum, Pittsburgh, Pa.  
 Glenk, Robert, Curator, Louisiana State Museum, New Orleans, La.  
 Glenn, L. C., Vanderbilt University Museum, Nashville, Tenn.  
 Goll, George P., Curator's Assistant, Philadelphia Museums, Philadelphia, Pa.  
 Goodale, George Lincoln, Honorary Curator, Botanical Museum, Harvard University, Cambridge, Mass.

- \*Goodyear, Wm. H., Curator of Fine Arts, Brooklyn Institute Museum, Brooklyn, N. Y.
- \*Gordon, G. B., Curator, Section of Ethnology, Free Museum of Science and Art, Philadelphia, Pa.
- Graenicher, Sigmund, Curator of Invertebrate Zoology, Public Museum of the City of Milwaukee, Milwaukee, Wis.
- Grant, U. S., Curator, Museum of the College of Liberal Arts, Northwestern University, Evanston, Ill.
- Greenman, Jesse M., Assistant Curator of Botany, Field Museum of Natural History, Chicago, Ill.
- \*Greenman, Milton J., Director, The Wistar Institute of Anatomy, Philadelphia, Pennsylvania.
- \*Griffin, Delia Isabel, Director, The Fairbanks Museum of Natural Science, St. Johnsbury, Vt.
- \*Griffith, A. H., Director, Detroit Museum of Art, Detroit, Mich.
- Grinnell, Joseph, Director, Museum of Vertebrate Zoology, University of California, Berkeley, Cal.
- Gross, A. O., Taxidermist, University of Illinois Museum, Urbana, Ill.
- Gueret, E. N., Assistant Curator, Division of Osteology, Field Museum of Natural History, Chicago, Ill.
- \*Hall, Christopher W., Curator, Geological Museum, University of Minnesota, Minneapolis, Minn.
- Hall, F. S., Curator, State Museum, University of Washington, Seattle, Wash.
- Hartman, C. V., Ethnographical Museum, Stockholm, Sweden.
- \*Henderson, Junius, Curator of the Museum, University of Colorado, Boulder, Colorado.
- \*Hollick, Arthur, Curator, Department of Fossil Botany, New York Botanical Garden, New York City.
- \*Hooper, Franklin W., Director, The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
- \*Hornaday, William T., Director, New York Zoological Park, New York City.
- \*Houston, S. F., Department of Archæology, University of Pennsylvania, Philadelphia, Pa.
- \*Hovey, Edmund Otis, Curator, Department of Geology and Invertebrate Paleontology, American Museum of Natural History, New York City.
- Howe, Marshall A., Curator of the Museum, New York Botanical Garden, New York City.
- Howland, Henry R., Superintendent, Buffalo Society of Natural Sciences, Buffalo, N. Y.
- Hutchinson, Charles L., President, Board of Trustees, The Art Institute of Chicago, Chicago, Ill.
- Hyett, William James, Assistant in charge of Galleries, Department of Fine Arts, Carnegie Institute, Pittsburgh, Pa.
- Ives, Halsey C., Director, City Art Museum, Forest Park, St. Louis, Mo.
- \*Jenkins, L. W., Curator of Ethnology, Peabody Museum, Salem, Mass.
- Jennings, Otto E., Assistant Curator of Botany, Carnegie Museum, Pittsburgh, Pennsylvania.
- Jennings, Mrs. Otto E., Assistant in Section of Botany, Carnegie Museum, Pittsburgh, Pa.

- \*Johnson, Charles W., Curator, Boston Society of Natural History, Boston, Mass.
- Jones, Lynds, Curator, Zoological Museum, Oberlin College, Oberlin, Ohio.
- Justice, William G., Buffalo Historical Society, Buffalo, N. Y.
- \*Kahl, Paul Hugo Isidore, Custodian, Section of Entomology, Carnegie Museum, Pittsburgh, Pa.
- Kalmbach, Edwin R., Assistant, Division of Economic Investigations, Biological Survey, Washington, D. C.
- Katzenberger, George A., Curator, Museum of Carnegie Library, Greenville, Ohio.
- Kent, Henry W., Assistant Secretary, Metropolitan Museum of Art, New York City.
- \*Kermode, Francis, Curator, Provincial Museum, Victoria, B. C.
- Koehler, Robert, Director, Minneapolis School of Fine Arts, Minneapolis, Minn.
- \*Kunz, George F., Honorary Curator of Gems, American Museum of Natural History, New York City.
- \*Lamb, Daniel Smith, Pathologist, Army Medical Museum, Washington, D. C.
- Levy, Florence N., Assistant, Metropolitan Museum of Art, New York City.
- Libbey, William, Director, E. M. Museum, Princeton, N. J.
- \*Lindahl, Josua, Late Director of the Museum, Cincinnati Society of Natural History, Cincinnati, Ohio. Address: 7732 Chauncey Ave., Chicago, Ill.
- Link, Gustave A., Taxidermist, Carnegie Museum, Pittsburgh, Pa.
- Lippincott, Elsie, Librarian, Field Museum of Natural History, Chicago, Ill.
- Loomis, Leverett Mills, Director of the Museum, California Academy of Sciences, San Francisco, Cal.
- \*Lucas, Frederic A., Curator-in-chief, Museums of The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
- MacAlister, Mary T., Curator, Drexel Institute Museum, Philadelphia, Pa.
- \*MacCurdy, George Grant, Curator, Section of Anthropology, Yale University Museum, New Haven, Conn.
- \*McGee, W J, Secretary, Inland Waterways Commission, Department of Agriculture, Washington, D. C.
- \*McGuire, F. B., Director, Corcoran Gallery of Art, Washington, D. C.
- McIlvaine, Caroline M., Librarian, Chicago Historical Society, Chicago, Ill.
- McIlvaine, Mabel, Assistant, Metropolitan Museum of Art, New York City.
- McIntosh, William, Curator, Natural History Museum, St. John, N. B.
- Maddox, Robert D., Curator, Medical Museum, University of Cincinnati, Cincinnati, Ohio.
- Madison, H. L., Curator, Park Museum, Providence, R. I.
- Martin, Daniel S., Honorary Curator, Department of Geology, Charleston Museum, Charleston, S. C.
- Meek, Seth E., Curator, Department of Ichthyology, Field Museum of Natural History, Chicago, Ill.
- Mengel, Levi W., Director, Reading Public Museum, Reading, Pa.
- Meyers, Ira B., Curator, School of Education Museum, University of Chicago, Chicago, Ill.
- Miller, A. W., Curator, Oregon Academy of Sciences, Portland, Ore.
- Miller, Paul C., Walker Museum, University of Chicago, Chicago, Ill.



- \*Mills, William C., Curator and Librarian, Ohio State Archæological and Historical Society, Ohio State University, Columbus, Ohio.
- Millsbaugh, Charles F., Curator of Botany, Field Museum of Natural History, Chicago, Ill.
- Millsbaugh, Mrs. Charles F., Chicago, Ill.
- \*Miner, Roy W., Assistant Curator of Invertebrate Zoology, American Museum of Natural History, New York City.
- \*Montgomery, Henry, Curator of the Museum, University of Toronto, Toronto, Ontario.
- Montgomery, Thomas L., Director, Pennsylvania State Museum, Harrisburg, Pennsylvania.
- Moorehead, Warren K., Curator, Department of Archæology, Phillips Academy, Andover, Mass.
- Morris, E. L., Curator of Natural Science, Brooklyn Institute Museum, Brooklyn, N. Y.
- \*Morse, Edward S., Director, Peabody Museum, Salem, Mass.
- \*Morse, Silas R., Curator, New Jersey State Museum, Trenton, N. J.
- \*Nachtrieb, Henry F., Curator, Zoological Museum, University of Minnesota, Minneapolis, Minn.
- Nichols, Henry W., Assistant Curator of Geology, Field Museum of Natural History, Chicago, Ill.
- \*Nutting, Charles C., Curator, Museum of Natural History, State University of Iowa, Iowa City, Iowa.
- Ortmann, Arnold E., Curator of Invertebrate Zoology, Carnegie Museum, Pittsburgh, Pa.
- Osgood, Wilfred H., Assistant Curator of Mammalogy and Ornithology, Field Museum of Natural History, Chicago, Ill.
- Paarmann, J. H., Curator, Davenport Academy of Sciences, Davenport, Iowa.
- Parkinson, Edward K., Director, Albany Institute, Albany, N. Y.
- Perine, Clara N., Assistant to Director, The Wistar Institute of Anatomy, Philadelphia, Pa.
- \*Peterson, Harry C., Curator, Leland Stanford Junior Museum, Palo Alto, Cal.
- \*Peterson, Olaf August, Field Collector and Preparator of Mammals and Birds, Carnegie Museum, Pittsburgh, Pa.
- Pickard, John, University of Missouri, Columbus, Mo.
- Pilsbry, Henry A., Curator, Academy of Natural Sciences, Philadelphia, Pa.
- Pitkin, Albert Hastings, Curator of Ceramics, Morgan Memorial, Wadsworth Atheneum, Box 867, Hartford, Conn.
- Pollard, Charles Louis, Curator-in-chief, Museum of Staten Island Association of Arts and Sciences, New Brighton, N. Y.
- Prentice, Sydney, Artist and Illustrator, Carnegie Museum, Pittsburgh, Pa.
- Putnam, Edward K., Acting Director, Davenport Academy of Sciences, Davenport, Iowa.
- \*Putnam, Frederick W., Honorary Curator, Peabody Museum, Harvard University; Professor Emeritus of Anthropology, University of California. Address: Cambridge, Mass.
- Ranck, Samuel H., Librarian, Grand Rapids Public Library, Grand Rapids, Michigan.

- \*Rathbun, Richard, Assistant Secretary, Smithsonian Institution, in charge United States National Museum, Washington, D. C.
- \*Rathmann, C. G., Director, Educational Museum, St. Louis, Mo.
- \*Raymond, Percy E., Invertebrate Paleontologist, Geological Survey of Canada, Ottawa.
- \*Rea, Paul M., Director, The Charleston Museum, Charleston, S. C.
- Reinecke, Ottomar, Buffalo Society of Natural Sciences, Buffalo, N. Y.
- Rice, William North, Wesleyan University Museum, Middletown, Conn.
- Riggs, Elmer Samuel, Assistant Curator of Paleontology, Field Museum of Natural History, Chicago, Ill.
- Robinson, Edward, Director, Metropolitan Museum of Art, New York City.
- Rothermel, John G., Superintendent, Wagner Free Institute of Science, Philadelphia, Pa.
- \*Rothrock, Boyd P., Curator, Division of Zoology, Pennsylvania State Museum, Harrisburg, Pa.
- Rothrock, Mrs. Boyd P., Accessionist and Foliage Worker, Pennsylvania State Museum, Harrisburg, Pa.
- Rowe, Louis Earle, Docent, Museum of Fine Arts, Boston, Mass.
- Ruthven, A. G., Head Curator of the Museum, University of Michigan, Ann Arbor, Mich.
- Sage, Cornelia Bently, Director, Albright Art Gallery, Buffalo, N. Y.
- Santens, Jos. A., Preparator, Taxidermic Laboratory, Carnegie Museum, Pittsburgh, Pa.
- \*Santens, Remi H., Preparator, Taxidermic Laboratory, Carnegie Museum, Pittsburgh, Pa.
- Sargent, Herbert E., Director, Kent Scientific Museum, Grand Rapids, Mich.
- Schoff, Wilfred H., Secretary and Assistant Treasurer, The Philadelphia Museums, Philadelphia, Pa.
- \*Schuchert, Charles, Curator of Geology, Peabody Museum, Yale University, New Haven, Conn.
- Severance, Frank H., Secretary, Buffalo Historical Society, Buffalo, N. Y.
- Shafer, John A., Custodian of the Museums, New York Botanical Garden, Bronx Park, New York City.
- \*Sherwood, George H., Assistant Secretary, American Museum of Natural History, New York City.
- Shrosbree, George, Chief Taxidermist, Public Museum of the City of Milwaukee, Milwaukee, Wis.
- Simms, S. C., Assistant Curator of Anthropology, Field Museum of Natural History, Chicago, Ill.
- \*Skiff, Frederick J. V., Director, Field Museum of Natural History, Chicago, Ill.
- Skinner, Henry, Curator, American Entomological Society, Academy of Natural Sciences, Philadelphia, Pa.
- Small, John K., Head Curator of the Museums and Herbarium, New York Botanical Garden, Bronx Park, New York City.
- Smith, Frank, Curator of Museum, University of Illinois, Urbana, Ill.
- Smith, Lee H., Vice-President, Buffalo Society of Natural Sciences, Buffalo, N. Y.
- \*Smith, T. Guilford, President, Buffalo Society of Natural Sciences, Buffalo, N. Y.
- Stevens, Mrs. George W., Assistant to Director, Toledo Museum of Art, Toledo, O.

- Stevenson, Mrs. Cornelius, Assistant Curator and Lecturer, Pennsylvania Museum and School of Industrial Art, Philadelphia, Pa.
- Stewart, Douglas, Assistant to Director, Carnegie Museum, Pittsburgh, Pa.
- \*Stone, Witmer, Assistant Curator, Academy of Natural Sciences, Philadelphia, Pennsylvania.
- Stotsenberg, J. MacPherson, Curator, The Wistar Institute of Anatomy, Philadelphia, Pa.
- Strecker, John K., Jr., Curator, Baylor University Museum, Waco, Texas.
- Swarth, Harry S., Curator of Ornithology, Museum of Vertebrate Zoology, University of California, Berkeley, Cal.
- Sweeney, Arthur, Secretary, St. Paul Institute, St. Paul, Minn.
- Toothaker, Charles R., Curator, The Philadelphia Museums, Philadelphia, Pa.
- \*Tower, Ralph W., Curator of Physiology and Books and Publications, American Museum of Natural History, New York City.
- \*Townsend, Charles H., Director, New York Aquarium, Battery Park, New York City.
- \*Townsend, Louis H., Osteologist, Carnegie Museum, Pittsburgh, Pa.
- Trask, John E. D., Secretary and Manager, Pennsylvania Academy of Fine Arts, Philadelphia, Pa.
- Uhle, Max, Director, Museo de Historia Nacional, Lima, Peru.
- Van Horne, Mary, Librarian, The Art Institute of Chicago, Chicago, Ill.
- Wagenseller, B. Meade, Assistant, Philadelphia Museums, Philadelphia, Pa.
- \*Ward, Henry L., Director, Public Museum of the City of Milwaukee, Milwaukee, Wisconsin.
- Weller, Stuart, Curator, Walker Museum, University of Chicago, Chicago, Ill.
- Whitmore, Francis E., Curator, Higgins Museum, Cortland, N. Y.
- \*Wilcomb, C. P., Curator, Oakland Public Museum, Oakland, Cal.
- \*Willoughby, Charles C., Assistant Curator, Peabody Museum, Harvard University, Cambridge, Mass.
- Wilson, Charles R., Vice-President, Buffalo Historical Society, Buffalo, N. Y.
- Wilson, P. C., President, Board of Trustees, Chattanooga Museum, Chattanooga, Tennessee.
- \*Wilson, W. P., Director, The Philadelphia Museums, Philadelphia, Pa.
- \*Wissler, Clark, Curator of Anthropology, American Museum of Natural History, New York City.
- Woodruff, Frank M., Ornithologist, The Chicago Academy of Sciences, Chicago, Ill.
- Wright, Mrs. A. A., Custodian, Olney Art Collection, Oberlin College, Oberlin, Ohio.
- Zeller, August, Superintendent of Installation of Agriculture and Sculpture, Department of Fine Arts, Carnegie Institute, Pittsburgh, Pa.
- \*Zierden, Alicia M., Curator, Division of Education, Pennsylvania State Museum, Harrisburg, Pa.

## SUSTAINING MEMBERS

- Academy of Natural Sciences of Philadelphia, Philadelphia, Pa.
- \*American Museum of Natural History, 77th St. and Central Park West, New York City.
- \*Art Association of Indianapolis, (John Herron Art Institute), Indianapolis, Ind.
- \*The Art Institute of Chicago, Chicago, Ill.
- Boston Society of Natural History, Boston, Mass.
- \*Brooklyn Institute Museum, Eastern Parkway, Brooklyn, N. Y.
- \*Carnegie Museum, Department of the Carnegie Institute, Pittsburgh, Pa.
- \*The Charleston Museum, Charleston, S. C.
- \*The Chicago Academy of Sciences, Lincoln Park, Chicago, Ill.
- Cincinnati Museum Association, Cincinnati, Ohio.
- City Art Museum, Forest Park, St. Louis, Mo.
- Colorado Museum of Natural History, Denver, Col.
- \*The Corcoran Gallery of Art, Washington, D. C.
- \*Deseret Museum, Salt Lake City, Utah.
- The Essex Institute, Salem, Mass.
- \*The Fairbanks Museum of Natural Science, St. Johnsbury, Vt.
- \*Field Museum of Natural History, Chicago, Ill.
- \*Free Museum of Science and Art, Department of Archæology, University of Pennsylvania, Philadelphia, Pa.
- \*Metropolitan Museum of Art, New York City.
- Museo Nacional de Bogota, Bogota, Colombia.
- Museum of the College of Liberal Arts, Northwestern University, Evanston, Ill.
- \*Museum of Fine Arts, Boston, Mass.
- \*New York Botanical Garden, Bronx Park, New York City.
- \*New York State Museum, Albany, N. Y.
- Peabody Museum, Salem, Mass.
- \*Pennsylvania Museum and School of Industrial Art, Memorial Hall, Fairmount Park, Philadelphia, Pa.
- Pennsylvania State Museum, Harrisburg, Pa.
- The Philadelphia Museums, 34th St., below Spruce, Philadelphia, Pa.
- \*Public Museum of the City of Milwaukee, Milwaukee, Wis.
- Syracuse Museum of Fine Arts, Syracuse, N. Y.
- University of Nebraska, Lincoln, Neb.
- Wadsworth Athenæum, Hartford, Conn.
- Walker Museum, University of Chicago, Chicago, Ill.
- \*Washington State Art Association, Seattle, Wash.
- \*Williams College Library, Williamstown, Mass.

## NECROLOGY

**GEORGE FISK COMFORT, L.H.D., L.L.D.**

Member of the American Association of Museums since 1907. Director and founder of the Syracuse Museum of Fine Arts. One of the founders and a member of the original board of trustees of the Metropolitan Museum of Art in New York City. Organizer of the American Philological Association in 1869, and of the Central New York Society of Artists in 1901. Organizer of the College of Fine Arts of Syracuse University. in 1873, and dean of its faculty for twenty years. Member of many American and foreign learned societies. A leader in art education in America.

Born in Berkshire, Tioga County, New York, September 20, 1833. Died in Mont Clair, New Jersey, May 5, 1910.

---





## INDEX

- Adams, C. C., Paper on "The Relation of Field Excursions to the Activities of Local Museums," 112-124
- Amendments to Constitution, 8, 9, 58
- American Archeological Society, 33
- American Geographical Society, 26, 30
- American Museum of Natural History, 25-26, 30, 31, 37
- American Society of Mechanical Engineers, 26, 30
- Antiquarians of the Art Institute, 94-95
- Archeological Objects, *see* Historical and Archeological Objects
- Art, Free, Committee on, 7
- Art Institute of Chicago, 92-96
- Attendance, Roll of, 1-3
- Auditing Committee, 58, 87
- Baker, F. C., Paper on "A Method of Exhibiting Large Descriptive Labels on the Outside of Museum Cases," 21-23; Paper on "School Loan Collections as Prepared by the Chicago Academy of Sciences," 36-40; Appointed to Auditing Committee, 58; Remarks by, 31, 33, 36, 40, 41, 99-100
- Barrett, S. A., Remarks by, 33, 35
- Big Bottom Park, 35
- Bird Population of Illinois, 42
- Boston, Invitation to meet at, 97
- Botanical Installation, Paper by C. F. Millspaugh, 52-56
- Brimley, H. H., Remarks by, 111
- Brooklyn Institute of Arts and Sciences, 26, 30
- Buffalo Fine Arts Academy, 96, 112
- Buffalo Historical Society, 31, 65-66, 72, 89-90, 112
- Buffalo Society of Natural Sciences, 31, 32, 37, 40-41, 97, 112
- Carnegie Museum, 37
- Carpenter, N. H., Paper on "The Value of Members to Museums," 91-97
- Charleston Museum, 41
- Chicago Academy of Sciences, 21-23; School Loan Collections of, 36-40
- Children's Museum, 26, 30
- Cincinnati Museum Association, 97
- City History Club, 26, 30
- Clarke, J. M., Remarks by, 41, 72-73, 87-89, 90
- College of the City of New York, 26-27, 30
- Comfort, George F., Death of, 7, 112, 141
- Committee, Auditing, 58, 87; on Amendments, 58; on Coöperation with Historical Societies, 73; on Free Art, 7; on Historical and Archeological Objects, 36, 74, 98; on Postal Rates, 7
- Constitution, 128-129; Amendments to, 8, 9, 58, 98
- Country Club, Resolution of Thanks to, 112
- Crook, A. R., Paper on "The Training of Museum Curators," 59-63; Remarks by, 24, 42, 64, 104
- Cummings, C. E., Demonstration by, 91, 97
- Curators, Training of, 59-63
- Detroit Museum of Art, 97
- Directory of Museums, 3-5, 59

- Election of Officers, 59  
 Exhibition Cases without Shelves,  
 Paper by E. N. Gueret, 16-18  
 Exhibition Jars, 19; Semi-cylindrical,  
 20
- Fairbanks Museum of Natural Science, 73-74  
 Fairmount Park Art Association of Philadelphia, 97  
 Farrington, O. C., Appointed to Auditing Committee, 58; Remarks by, 24  
 Field Excursions, Relation of, to Activities of Local Museums, Paper by C. C. Adams, 112-124  
 Field Museum of Natural History, 16-18, 105-111; Botanical Installation in, 52-56  
 Formula for Water Composition, 12  
 Fort Ancient, 34  
 Fossils and Skeletons, Exhibition of, in Popular Museums, Paper by H. L. Ward, 100-103  
 Fraunces Tavern, 27, 30  
 Freeman, Mrs. J. K., Remarks by, 74  
 Friends of American Art, 94-95
- Gallery Leaflet for Art Museums, Paper by L. E. Rowe, 75-77  
 Gardiner, Elizabeth M., Paper on "The Library of the Smaller Museum," 78-84; Remarks by, 77  
 Gelatine Composition in Museum Groups, Paper by George Shrobbrec, 10-12  
 Geological Time Chart, 51  
 Gilman, B. I., Paper on "Museum Registry of Local Art," 84-87  
 Griffin, Delia I., Remarks by, 73-74  
 Gueret, E. N., Paper on "Exhibition Cases without Shelves," 16-18; Remarks by, 18, 20
- Hill, Henry W., Remarks by, 64  
 Historical and Archeological Objects, Preservation of, 32, 33, 34, 35, 74, 87-90, 98
- Historical Museums, Paper by F. H. Severance, 64-68  
 Historical Society of New York City, 72  
 Historical Society of Niagara Falls, 89-90  
 Hollick, Arthur, Paper on "The Paleobotanical Collections of the New York Botanical Garden," 43-52; Remarks by, 103  
 Howland, H. R., Elected Councillor, 59; Resolution of Thanks to, 112; Remarks by, 24, 33-34, 40-41  
 Hudson-Fulton Celebration, Museum Cooperation in, 24-30
- Invitation, To meet in Boston, 97; To meet in St. Louis, 97, 98
- John Herron Art Institute of Indianapolis, 96  
 Johns Hopkins University, 43  
 Justice, W. G., Resolution of Thanks to, 112
- Kunz, G. F., Paper on "Museum Cooperation in the Hudson-Fulton Celebration of 1909," 24-30
- Label Holder, Home-made, 21  
 Labeling Large Collections of Mammals and Birds, Paper by W. H. Osgood, 105-111  
 Labels, Method of Exhibiting Large Descriptive, Paper by F. C. Baker, 21-23  
 Labels and Labeling, 21-23, 24, 32, 44-47, 105  
 Laboratory of Natural History of Illinois, 42  
 Lantern Slides, Demonstration of, 91, 97  
 Library of the Smaller Museum, Paper by Elizabeth M. Gardiner, 78-84  
 Livingston County Historical Society, 66-67

- Long Island Historical Society, 27, 30, 72
- Lucas, F. A., Elected Councilor, 59; Remarks by, 8, 12, 16, 18, 20, 31, 33, 57, 58, 64, 87, 99, 104, 111, 126
- Members, Value of, to Museums, Paper by N. H. Carpenter, 91-97
- Members, In Attendance at Buffalo Meeting, 1-3; Conditions of becoming, 128-129; New, 6-7; Charter, 132; Active, 132-139; Life, 132; Sustaining, 140; Dues of, 8, 9, 58; In Arrears, 58; Death of, 7, 112, 141
- Metropolitan Museum of Art, 25, 29-30, 96
- Miamisburg, Ohio, Mound at, 35
- Mills, W. C., Remarks by, 34-35
- Millsbaugh, C. F., Paper on "Botanical Installation," 52-56; Remarks by, 13, 57, 70-71, 99
- Milwaukee Public Museum, 10-16, 37
- Morris, E. L., Remarks by, 99
- Morse, E. S., Elected Vice-President, 59; Remarks by 8-9, 57, 64, 71
- Museum Catalogs and Records, Paper by C. R. Toothaker, 98
- Museum Cooperation in the Hudson-Fulton Celebration of 1909, Paper by G. F. Kunz, 24-30
- Museum Groups, Gelatine Composition in, Paper by George Shrobbree, 10-12
- Museum of Fine Arts, Boston, 75-77, 84-87, 96
- Museum Registry of Local Art, Paper by B. I. Gilman, 84-87
- Museums of Natural History, Organization of, 124-126
- Museums, Directory of, 3-5
- National Arts Club, 27, 30
- Necrology, 141
- New York Aquarium, 27, 30
- New York Botanical Garden, 27, 30; Paleobotanical Collections of, 43-52
- New York Genealogical and Biographical Society, 28, 30
- New York Historical Society, 28, 30
- New York Public Library, Lenox Branch, 28, 30
- New York State Historical Society, 73
- New York Zoological Park, 28, 30
- Niagara Frontier Landmarks Association, 90
- Officers, Election of, 59
- Ohio State Archeological and Historical Society, 34
- Organization of New Museums of Natural History, Paper by A. G. Ruthven, 124-126
- Ortmann, A. E., Remarks by, 20, 32
- Osgood, W. H., Paper on "Labeling Large Collections of Mammals and Birds," 105-111; Remarks by, 104, 111
- Paleobotanical Collections of the New York Botanical Garden, Paper by Arthur Hollick, 43-52
- Pennsylvania Museum and School of Industrial Art, 96
- Philadelphia Museums, 37
- Pollard, C. L., Demonstration by, 20, 21; Remarks by, 20, 21, 71-72, 111
- Postal Rates, Committee on, 7
- Proceedings*, Distribution of, 8, 58
- Rea, P. M., Report as Secretary, 3-7; Re-elected Secretary, 59; Remarks by, 8, 9, 35, 36, 41, 68-70
- Reformed Protestant Dutch Church, 28, 30
- Report of Auditing Committee, 87; of Secretary, 3-7; of Treasurer, 7, 58, 130-131
- Resolutions, 98, 112

- Robinson, Edward, Elected Second Vice-President, 59
- Rothrock, Boyd P., Remarks by, 23
- Rowe, L. E., Paper on "A Gallery Leaflet for Art Museums," 75-77; Remarks by, 72, 77
- Ruthven, A. G., Paper on "Organization of New Museums of Natural History," 124-126
- Sage, Cornelia B., Resolution of Thanks to, 112
- St. Louis, Invitation to meet at, 97, 98
- St. Louis Board of Education, 37
- Sargent, H. E., Remarks by, 19, 24, 34, 42-43, 73
- School Loan Collections as Prepared by the Chicago Academy of Sciences, Paper by F. C. Baker, 36-40
- Secretary, Report of, 3-7
- Serpent Mound Park, 34
- Severance, F. H., Paper, on "Historical Museums," 64-68; Resolution of Thanks to, 112; Remarks by, 89-90
- Shrobbree, George, Paper on "Gelatine Composition in Museum Groups," 10-12
- Shrobbree Specimen Hanger, Paper by H. L. Ward, 13-16
- Skiff, F. J. V., Elected President, 59
- Smith, T. Guilford, Remarks by, 31-32
- Specimen Hanger, Shrobbree, 13-16
- Staten Island Association of Arts and Sciences, 28-29, 30
- Stereoscopic Views, Value of, 76
- Stewart, Douglas, Remarks by, 40
- Talmage, J. E., Appointed as Committee on Amendments, 58
- Toothaker, C. R., Demonstration by, 19; Paper on "Museum Catalogs and Records," 98; Remarks by, 19, 20
- Training of Museum Curators, Paper by A. R. Crook, 59-63
- Treasurer, Report of, 7, 58, 130-131
- U. S. Biological Survey, 105-106
- U. S. National Museum, 43
- Van Cortlandt House, 29, 30
- Ward, H. L., Paper on "Exhibition of Fossils and Skeletons in Popular Museums," 100-103; Paper on "The Shrobbree Specimen Hanger," 13-16; Appointed to Auditing Committee, 58; Remarks by, 13, 19, 21, 40, 41-42
- Washington's Headquarters, 29, 30
- Wilson, W. P., Report as Treasurer, 7, 58, 130-131; Re-elected Treasurer, 59; Remarks by, 30, 31, 35, 56-57
- Worcester Art Museum, 78-84
- Zierden, Alicia M., Remarks by, 33, 104























GETTY CENTER LIBRARY



3 3125 00089 7088

